FEB 20 1923

JUNE, 1909.

Vol. XXVII. *No.* 104.

THE

BRISTOL MEDICO-CHIRURGICAL JOURNAL

PUBLISHED UNDER THE AUSPICES OF

THE BRISTOL MEDICO-CHIRURGICAL SOCIETY.

Editor: R. SHINGLETON SMITH, M.D., B.Sc.

WITH WHOM ARE ASSOCIATED

J. MICHELL CLARKE, M.A., M.D.,

J. LACY FIRTH, M.S., M.D., JAMES SWAIN, M.S., M.D.

P. WATSON WILLIAMS, M.D., *Assistant Editor.*

Editorial Secretary: J. A. NIXON, B.A., M.B.

CONTENTS.

	Page
Small-pox in Bristol and Neighbourhood (1908-9). By D. S. Davies, M.D. Lond.	98
The Indications for Gastro-Enterostomy. By T. Carwardine, M.S. Lond., F.R.C.S.	107
A Family with a Congenital Deformity of the Nose, and the Results of Subcutaneous Injection of Wax. By E. H. E. Stack, M.B., B.C., F.R.C.S.	119
A Case of Lead Encephalopathy. By J. Angell James, M.R.C.S., L.R.C.P.	124
Cretinism and the Puerperium: Sequel to a Recorded History. By David A. Alexander, M.B.	128
A Discussion on "Treatment by Ionisation or Cataphoresis." Opened by H. P. Tayler, M.A., M.B. Cantab., and H. Lewis Jones, M.A., M.D. Cantab., F.R.C.P.	132
Electricity in General Practice. By Herbert P. Tayler, M.A., M.B. Cantab.	145
Progress of the Medical Sciences:	
Medicine. J. Michell Clarke, M.A., M.D., F.R.C.P.	152
Surgery. C. A. Morton, F.R.C.S.	157
Dermatology. J. A. Nixon, B.A., M.B., M.R.C.P.	161
Reviews of Books	165
Editorial Notes	178
Notes on Preparations for the Sick	183
The Library of the Bristol Medico-Chirurgical Society	184
Meetings of Societies	186
Local Medical Notes	189

BRISTOL: J. W. ARROWSMITH.

London: J. & A. Churchill, 7 Great Marlborough Street.

Price One Shilling and Sixpence.

EXTRACT from Instructions issued by
The London Hospital:—

HOW TO BRING UP INFANTS BY HAND.

"Fresh Cow's Milk must be used; during the first month it must be diluted with at least twice as much water, or better still, with lime water or Barley Water in the same proportion."

"As the child gets older the proportion of milk must be gradually increased."

To MEMBERS of the MEDICAL PROFESSION!

Gentlemen,—You may safely order

ROBINSON'S
"PATENT"
BARLEY
"IN POWDER FORM"

to make

BARLEY WATER

as a

DILUENT OF COW'S MILK FOR INFANT FEEDING.

More economical and more easily prepared than the ordinary Pearl Barley, which is often adulterated with Soapstone or Steatite.

IS THE PUREST FARINA OF THE —— FINEST SCOTCH BARLEY.——

Samples and full information can be obtained from

KEEN, ROBINSON & CO. LTD., LONDON.

The Bristol Medico-Chirurgical Journal.

"Scire est nescire, nisi id me
Scire alius sciret."

JUNE, 1909.

SMALL-POX IN BRISTOL AND NEIGHBOURHOOD (1908-9).

BY

D. S. DAVIES, M.D. Lond.,

Medical Officer of Health.

THREE points lend interest to the introductions of small-pox which occupied the early months of 1909:—

(1) The remarkable virulence and infectivity of the disease.

(2) The unusual circumstances accompanying the two main introductions of January and March.

(3) The manifestation of active hindrance to the Medical Executive arising from opposition to vaccination, and exerted, for the first time on record, through the Local Government of the city.

The first hint of forthcoming trouble was in December, 1908, when, after a year's freedom from small-pox, a corn-porter living in Bedminster, and at work within the incubation period on a steamship discharging grain at Portishead from Mariupol

(Sea of Azov), developed a mild attack of small-pox on December 14th, was removed to hospital, and discharged cured on January 23rd.

Before the first patient had left hospital, a man living in another part of the city sickened (about January 11th). In this instance, although no direct communication could be traced, the lapse of a double incubation period ($2 \times 14 = 28$ days) suggested causation through an intervening " missed " infection.

The Tramcar Episode.

This man unfortunately took the opportunity, before his illness was recognised and notified, of going by tramcar from the Horsefair, in the centre of the city, to Stapleton, on his way to the Workhouse, a ride of some three miles, traversing densely populated districts.

The control of small-pox notified immediately upon introduction into a family group in the city is fairly simple, involving merely the close observation and dealing with the comparatively few contacts at home or at work; and, by a judicious adjustment of revaccination, isolation, and other routine methods, has, over a series of years, proved effective. Thus in the ten years 1899–1908 the thirty-five introductions of the disease have resulted in a total of 136 cases, or an average yield per introduction of something under four cases.

But the circumstances under which this man became exposed—at the relieving offices, in the tramcar, and at work—involved the exposure to infection of 395 persons, who had to be kept under observation through a full incubation period; and this necessitated 5,147 visits of inquiry.

In addition to the known contacts, there must have been sundry others—passengers from and to places unknown—over whom no surveillance could be exercised. The problem was how to mark them down. Fortunately small-pox, even in its minimal forms, generally involves an initial fever of some severity, prompting resort to medical aid; so, as is usual, a warning notice was forwarded to every medical practitioner, briefly pointing out the facts, and noting the probable date of sickening. Notice was also sent to medical officers of health in adjacent districts.

This made no provision for those cases, the most dangerous of all, in which the initial symptoms, being slight, called only for domestic treatment, and in which the relief following a sparse eruption of papules would be followed by immediate resumption of work, in the confident belief that the illness was only a " touch of influenza cold," and that the ensuing eruption was evidence of its being successfully " driven out " by the remedies employed.

The contacts directly traceable to this case numbered four (see chart A). One other case in the same district was, in view of the time of sickening, probably a direct offshoot, and one of the Bedminster cases of January 29th may have been.

Of the directly resultant cases only one had issue, two men in a common lodging-house becoming infected, and these in turn infected a bootmaker friend, whose shop was a local gossip-house.

The two small circles shown in chart A under Mrs. D. and Mrs. R. represent two infants, unvaccinated at the time of their mother's attack, who were taken in, immediately vaccinated, and retained in the ward with their mother until discharge. The infants remained perfectly well.

It is possible also, as mentioned later, that an unknown passenger contracted the infection, and, himself an unrecognised (missed) case, went beyond the city and handed on the infection to the case in the country which started the Cossham outbreak. But this case may have had some other source.

The Bedminster Group.

The course of the disease in Bedminster has been spasmodic and disconcerting. While the outbreaks have been less obtrusive upon public attention, they have caused no less uneasiness to the medical department, for the disease has, rhizome-like, crept on beneath the surface, throwing up fatal buds at intervals.

The outbreak of January 5th, infecting one other member of a family, calls for no comment, though its origin was unknown.

The case of January 29th, possibly a contact of that of January 11th, infected only his daughter and a friend.

CITY OF BRISTOL.

SMALLPOX. DEC 1908 TO MAY 1909.

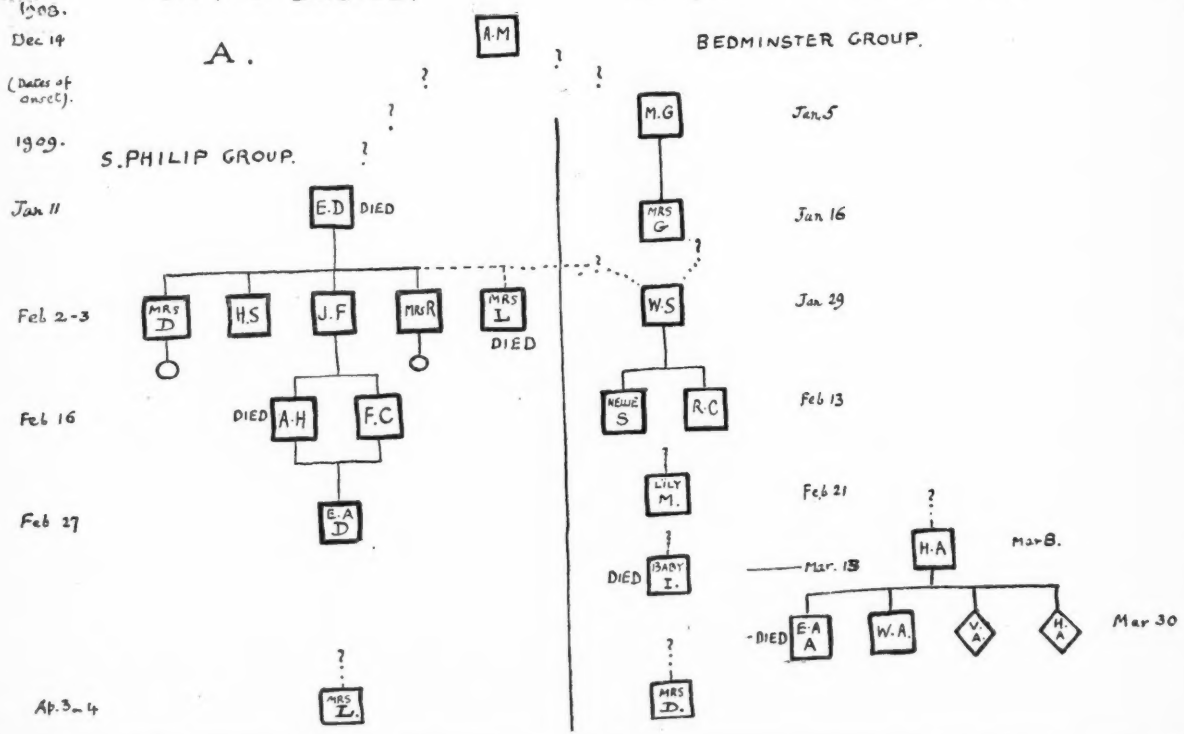
1908.
Dec 14
(Dates of onset).

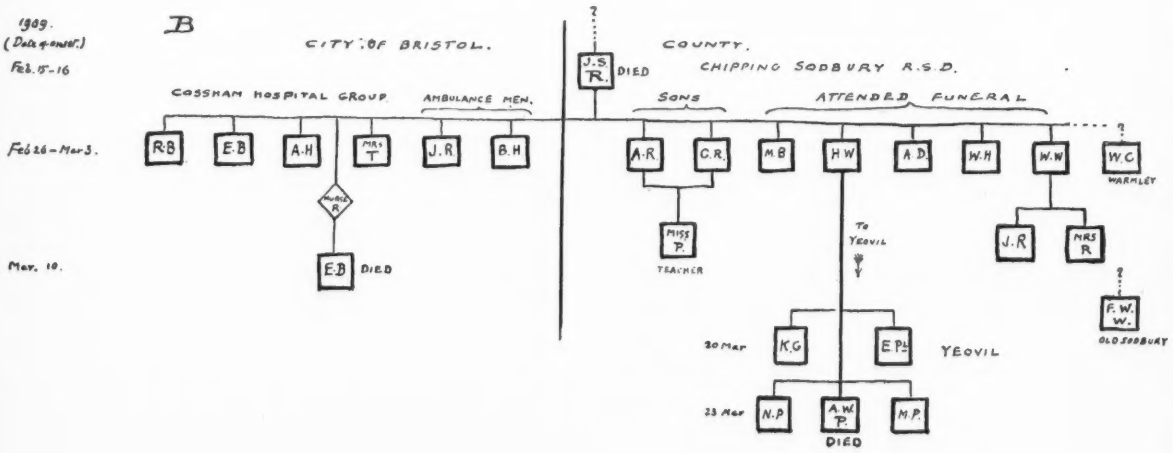
1909.

A.

S. PHILIP GROUP.

BEDMINSTER GROUP.




1909.
(Date of onset.)
Feb. 15-16
B
CITY OF BRISTOL.
COUNTY.
CHIPPING SODBURY R.S.D.
J.S R. DIED
COSSHAM HOSPITAL GROUP
AMBULANCE MEN.
SONS
ATTENDED FUNERAL
Feb 26 - Mar 3.
R.B
E.B
A.H
MRS T
J.R
B.H
A.R
C.R.
M.B
H.W
A.D.
W.H
W.W
W.C.
WARMLEY
NURSE R.
E.B DIED
MISS P.
TEACHER
To YEOVIL
J.R
MRS R.
F.W. W.
OLD SODBURY
Mar. 10.
30 Mar
K.G
E.P.
YEOVIL
23 Mar
N.P
A.W P.
DIED
M.P.

On February 21st a disconnected mild case appeared in another part of Bedminster, and on March 13th a suddenly fatal case in an adjacent street.

On March 30th another suddenly fatal case led to the discovery of a "missed" infection of March 8th, of uncertain origin. Two of the members of this family, well vaccinated boys, V. A. and H. A., though exposed to intense infection, sickened, it is true, but their illness proceeded no farther than the initial fever, and in three days they regained perfect health without the sign of any eruption. Another unvaccinated son of 16 passed through a severe attack.

Again, in another part of the same district, a quickly fatal case on May 14th led to the discovery of another "missed" infection of mild type, the outcome of which has yet to be learnt.

B. The Cossham Hospital Outbreak.

The second invasion, or re-invasion, of the city was somewhat remarkable. A man, J. S. R., sickened about February 12th with *variola nigra*, at a village named Wick, in the Chipping Sodbury Rural District, Gloucestershire. The source of his infection was undetermined, but not improbably it was derived through a missed case—from E. D. during the tram-ride in Bristol on January 16th—as there are just a little over two incubation periods between January 16th and February 12th. The case was unfortunately mistaken for *purpura*, and conveyed by a private ambulance service on February 15th to the Cossham Hospital, a general hospital in Bristol. The patient died in the isolation ward on February 16th, a *post-mortem* was duly made, and the death returned as "acute nephritis." Hence no precautions were taken. The body was returned to Wick for burial.

Meanwhile, the sickening of two ambulance men in Bristol on February 27th led us to inquire what cases they had moved on or about February 15th (twelve days). The simultaneous appearance of the disease in the man's two sons, and in five other persons who carried the coffin or attended the funeral, soon made the matter clear.

Up to the morning of March 3rd, when we first arrived at a solution of the puzzle, the hospital authorities were still unaware of impending danger. The incubation period was overdue when we visited, so it was interesting to find that Mrs. T., a charwoman who cleaned out the isolation ward, and R. B., a clerk whose room adjoined the ward, were at home with "influenza." They were both removed to hospital in the papular stage of small-pox. Later a kitchenmaid and a wardmaid, who had been in the isolation block, also sickened, and were duly removed to hospital.

Towards the end of February two nurses, Sister W. and Nurse R., who had been revaccinated in 1908 had developed, we were told, a train of symptoms—fever, headache, etc., lasting two days—which might do duty either for "influenza" or for the "initial fever" of small-pox. No papules developed, they recovered perfectly, and Nurse R. immediately returned to duty in the ward on or about February 28th.

Twelve days afterwards, on March 10th, a patient in her ward developed small-pox, and was removed to hospital, where she died. She must have contracted the infection about February 28th.

It would appear, then, that with small-pox, as with typhoid fever, attendants on patients may, after slight indisposition, and without developing the characteristic symptoms of the disease, acquire temporary infectivity—become, in fact, "acute carriers." There is, fortunately, no reason to apprehend the discovery that a certain percentage of cases may become, upon apparent recovery, "chronic small-pox carriers," although the inclusion in a population of such continuously infective persons would do much to lessen the numbers of unvaccinated opponents to vaccination, unless due recognition of the fact had previously accelerated their conversion.

The city fared very well from this introduction. Not a single case occurred outside those immediately employed or resident at Cossham Hospital, and no infection was communicated to anyone after we took the matter in hand on March 3rd.

The county paid a somewhat heavier penalty. Seven cases

received infection from the patient J. S. R., during his life or after his death. His two children had small-pox. The children's teacher suffered from a mild attack; one visitor to the funeral contracted the disease and carried it to Yeovil, where he infected five other persons, one fatally; another visitor suffered, and handed it on to two other inmates of his house. Two detached cases occurred also in the country—one at Cadbury Heath (Warmley), the other at Old Sodbury—but these proved sterile.

In all, this patient J. S. R. appears to have communicated infection, directly or indirectly, to twenty-five persons.

The Ambulance Episode.

The fact that a case of malignant small-pox had been conveyed in an ambulance used for general purposes naturally gave rise to some apprehension, which was not lessened by the fact of the sickening of both driver and attendant. It was found that thirty-eight cases had been removed in the same ambulance between February 16th and March 3rd to the various public hospitals, and to certain private residences in the city and neighbourhood. The ambulance management gave us free access to their books, from which we sorted out the cases, and despatched warning notices on the same evening, March 3rd, to the medical officers of the institutions concerned. It says much for the general care in cleanliness observed that, although no special measures of disinfection had been employed, as no suspicion of infection was entertained, not a single case of infection resulted to any one of the persons removed.

Personal infection is, of course, far more effective than that of "fomites," but the experiment, however fortunate the result in this instance, is not one to be repeated.

Co-operation with the County.

When the simultaneous infection of city and county occurred in March, I offered, with the consent of the Health Committee, to lend two experienced inspectors to assist in tracing out and watching contacts in the affected county areas. The plan

worked very well, and the work of both inspectors has received deserved commendation. In the city, too, special inspectors were detailed for surveillance over the invaded and threatened city districts. They too worked thoroughly well.

The Type of Disease.

It must be admitted that the present introduction is of extremely virulent type. This is shown by the fact that the fatal case of May 14th is the third death from hemorrhagic small-pox, all in unvaccinated children, in the district of Bedminster alone, and by the further fact that out of the thirty-two city cases six have been hemorrhagic at onset or later. This gives the enormous percentage of 18.7 cases hemorrhagic in the present outbreak.

The infectivity is also intense. Practically every person who came into contact with the first case of the Cossham outbreak contracted the disease, and twenty-five cases are seen to have resulted directly or indirectly.

The intensity of infection is also suggested by the partial success of the disease in breaking down the very strong barrier of recent vaccination in the case of two nurses at Cossham and of the two boys in the Bedminster family; but in all four instances their acquired immunity bore the strain well, and, beyond the temporary inconvenience of a two days' fever, no harm of any kind resulted. It is in this way that these intense infections are apt to show a series of cases alternating from extremely mild attacks in the well-protected to malignant attacks in the unprotected.

The Source of Introduction.

The first case in December was, as stated, in a man who worked upon a steamship from foreign discharging grain. No other case of illness is known to have occurred on board.

This history is not an uncommon one. Thus in January, 1907, a first case of small-pox occurred in a man who worked as a labourer in warehousing ship-brought goods.

In April, 1891, a corn-porter working on foreign ships sickened

of small-pox. No other case of illness was found upon the ship.

It is noteworthy also that the first case in the Cossham outbreak worked at a mill where part of the consignment from the Bristol ship was delivered, so that his infection may have been derived through infected sacks, rather than from secondary infection through a "missed" case from the tram-ride. It is also curious that the first family group in Bedminster, of January 5th, were relatives of the mill-owner; but the whole of the threads of causation are obscure, though suggestive of a distributed infection.

The Work of Supervision.

Some idea of the amount of work entailed by such outbreaks may be obtained from the number of contacts listed and visited between January 1st and May 1st. The contacts numbered 1,354, and the visits paid to them first and last were 16,398.

With an office staff and equipment designed only for work on a peace footing, this implies high pressure.

The Cost of Precautionary Measures.

The cost of the West Ham outbreak in 1902, which yielded 836 cases, was £29,381 17s. 4d.

The expenses of the present series of outbreaks have probably not yet amounted to £200 at a liberal estimate; but with so virulent a strain, and amongst a population still inadequately protected by vaccination and re-vaccination, the future of it is as yet on the knees of the gods.

Meanwhile, it is essential for ultimate success that the efforts of those directing the defensive measures should not only be unhampered, but actively supported.

Opposition from the Anti-Vaccination Standpoint.

The opposition to vaccination and to methods of control associated with vaccination, seeing whence it comes, can hardly be based on the merits or demerits of the case as a medical or scientific problem, but must have a deeper root in the mistaken

idea that it has something to do with class legislation, and is an infringement of an Englishman's liberty to court infection. I confess that I greatly admire the courage of those unprotected persons who, never having seen small-pox, yet express a willingness to expose themselves to its infection. For my part I make no boast in the presence of malignant small-pox, which I have seen and studied, and continue to see and study, but which I should shrink from approaching were I not fully vaccinated, and did I not test my resistance by vaccination at least every year.

THE INDICATIONS FOR GASTRO-ENTEROSTOMY.

BY

T. CARWARDINE, M.S.Lond., F.R.C.S.,

Surgeon to the Bristol Royal Infirmary.

WE have been accustomed to regard chronic dyspeptics as, like the poor, always with us. The enrichments of modern surgery, however, enable us to restore many of them to health, by establishing an alternative route for the gastric contents, providing free exit in stasis, physiological rest when necessary for healing, and early neutralisation in hyperacidity.

In conjunction with various medical men, I have performed sixty or seventy operations for diseases of the stomach, and have formed some general impressions from them :—

1. An ulcer may present few or no symptoms, shown by old scars seen at operation, and perforations without antecedent history.

2. A dilated stomach in middle age, with a history of frequent indigestion years previously, indicates pyloric stenosis from old ulceration, especially when there is visible gastric peristalsis.

3. Gastric lavage should be abandoned. The necessity for habitual use of the stomach tube is sufficient indication for gastro-enterostomy.

4. Perforating ulcers are more commonly gastric.

5. Ulcers which give rise to mechanical digestive troubles are more commonly pyloric.

6. Ulcers which cause serious hemorrhage are frequently duodenal.

7. A history of hæmatemesis is rare in cases of gastric or duodenal ulcer which perforate.

8. Duodenal ulcers are far more common than hitherto recognised.

9. A healed gastric ulcer may not seriously affect a patient, unless it produce hour-glass contraction or adhesions to surrounding parts. On the other hand, healed ulcers in the pylorus or duodenum may seriously contract the lumen, and give rise to secondary gastric insufficiency.

10. Pyloric ulceration and stenosis in early life may arrest development, just as it affects nutrition in later life. Operation affords an impetus to development and nutrition, sometimes with temporary metabolic phenomena clinically, and sometimes with relief of nervous symptoms.

11. The risks of gastro-enterostomy, performed by an experienced surgeon on modern lines, are inconsiderable. It is now time that the remarkable advance in this direction should be fully realised. The risks for benign conditions should not be greater than those of the radical cure of hernia. The brothers Mayo record 300 successive cases with a mortality of under 1 per cent., and only 1 per cent. of secondary operations were required. I have personally done twenty-seven consecutive gastro-enterostomies without any leakage at all, and with only one death, due to old heart trouble and not to failure of technique.

12. "Vicious circle," following operation, should not be met with now—it is a sign of faulty technique. At most, a little transient bilious vomiting on the second or third day may exceptionally occur, probably due to œdematous swelling at the line of union.

Before deciding that gastro-enterostomy is indicated, it is important to determine whether it be contra-indicated, lest surgical aid should fail to alleviate or cure. Operation should not

be done for mere pain and vomiting, symptoms common to many diseases. Nor should gastro-enterostomy be done, as a rule, unless the surgeon can confirm the diagnosis of some definite lesion at the time of inspection of the parts, though his ability to detect slight or less accessible lesions will improve with acquaintance. I cannot do better than quote the contra-indications given by my colleague, Dr. Nixon.[1]

Contra-Indications :—

1. Chronic alcoholism or drug taking.
2. Gastric crises.
3. Phthisis.
   (*a*) Dyspepsia.
   (*b*) Hæmoptysis.
   (*c*) Diaphragmatic pleurisy.
4. Mitral stenosis.
   (*a*) Pain.
   (*b*) Hæmoptysis.
5. Cirrhosis of liver.
6. Chronic Bright's disease (dyspepsia).
7. Renal colic.
8. Addison's disease (nausea, vomiting and faintness).
9. Overloaded or distended colon.
10. Arsenical poisoning.

To these might be added others, such as :—

11. Hysterical vomiting.
12. Gall-stone colic.
13. Dyspepsia of appendicitis.

There are certain **border-land cases** in which much care and judgement are necessary.

Unfettered by tradition, Dr. Nixon says, "Except during convalescence from an acute disease, I believe the diagnosis of 'atonic dilatation' should be received with the utmost scepticism. . . . Unless such a case yields very quickly to diet and treatment it should be explored. . . . As a disinterested observer of a very large number of surgical operations, I shall never make the

[1] *Bristol M.-Chir. J.*, 1908, xxvi, 224.

diagnosis of 'gastric neurosis' with complete assurance." On the other hand, we have the following observations from one of the most intrepid of surgeons: "We have but to look back on the discredit thrown upon surgery by the mutilating operations upon the pelvic organs of women to impel us to go slow on the numerous class of neurasthenic stomachs, and before we operate let us be sure the lesion exists elsewhere than in the mind of the patient" (Mayo).[1]

As far as my own personal experience goes, the most atonic and dilated stomachs I have handled have been those associated with prolonged pyloric stenosis. Next to them I would place the sagging stomachs of enteroptosis and slight degrees of pyloric contraction (? congenital), and the horse-shoe stomach which hangs like a bag of water with the cardiac and pyloric ends of the lesser curvature in contact. Perhaps the term "atonic dilatation of the stomach" in medicine may prove to have as little meaning as "atonic dilatation of the bladder" used to have in surgery. We now call the one urinary obstruction, and we are learning daily that the other may be the result of mechanical impediment more frequently than has been supposed.

The indications for possible gastro-enterostomy may be:—

1. Failure of reasonable medical treatment for benign conditions causing chronic dyspepsia.
2. All cases in which there is a suspicion of cancer. Surgery can only benefit these if they are explored early, before the "too late" signs of tumour and positive reactions to test-meals.
3. Chronic ulcer of duodenum or stomach.
4. Stenosis of duodenum or stomach (usually pyloric stenosis).
   - (*a*) Contracture from ulceration and scarring.
   - (*b*) Inflammatory tumour around ulcerations.
   - (*c*) Simple narrowing (? congenital).
   - (*d*) Hypertrophic pyloric stenosis of infants.
   - (*e*) From adhesions, *e.g.* to gall-bladder.
   - (*f*) Cancerous (under certain conditions).
5. Recurrent hemorrhage, duodenal or gastric.

[1] *St. Paul Medical Journal*, 1904, vi, 79.

6. Chronic dilatation of stomach, found at operation to be secondary to stenosis.

7. Hour-glass stomach.

8. Perforations in pyloric or duodenal regions (certain cases).

9. In gastrectomy (as part of the operation).

10. Duodenal fistula.

11. In marked gastroptosis—rarely.

12. *Acute dilatation of stomach* (?).

The success of gastro-enterostomy, and its low rate of mortality in the majority of cases of chronic dyspepsia which have not permanently yielded to medical treatment, justify the submission of such cases to the surgeon for his consideration, after excluding the contra-indicating causes of symptomatic pain and vomiting. It is not fair to the patient to withhold relief, and to permit the continued exposure to the greater risks of delay. The frequency with which **chronic dyspepsia** proves, on operation, to be due to some tangible cause, is a striking fact in modern practice.

The treatment of **cancer of the stomach** is on the eve of great advances. Its elusive tendency is great in the early stages, and its pathological vagaries are many ; but that cases are amenable to successful surgical relief, if only treated early enough, is beyond the shadow of a doubt. Therefore the time for operation is when there is a medical possibility of cancer, not a medical proof of the disease ; and there is no justification in waiting. The literature of the subject is overwhelming in indications that by the time a tumour can be felt clinically, and test-meals give somewhat definite (though often uncertain) results, the condition is too advanced for much hope from surgery. Gastro-enterostomy affords little advantage in advanced cancer of the stomach, when the mortality is as great as that of radical excision in earlier cases, and the relief granted to patients is so temporary that the operation is not in general favour with surgeons, except, perhaps, as a measure preliminary to gastrectomy, although most surgeons of experience prefer to perform the complete operation at one sitting. Sixty per cent. of cases of cancer of the stomach occur at the pyloric end ; the fundus remains free from involvement

for a long time ; and wasting, vomiting and distaste for food in a patient past middle life should excite suspicion. A diminution of HCl appears to be the only clinical test to which any real value can be attached, but it is not to be depended upon, especially when cancer supervenes upon chronic ulcer. Out of 1,200 cases, 400 came to operation, and the chemical and microscopical examination of the contents proved of little value. (Mayo.)

In **chronic ulceration of the stomach and duodenum,** and in its complications and sequelæ, gastro-enterostomy yields brilliant results, and to the pathological study of which modern surgery has contributed so largely. The stomach and duodenum should be considered as separate entities no longer. Physiologically they are complements one to the other ; embryologically, the fore part of the alimentary canal ends below the bile-papilla, where the digestive portion of the gut ends ; and Ochsner has shown that a muscular sphincter surrounds the duodenum an inch below the opening of the biliary and pancreatic ducts. The introduction of the pyloric sphincter merely restrains the gastric contents till prepared for duodenal digestion. It is a strange fact that cancer is so common in the stomach and so rare in the duodenum ; also that simple ulceration is common to both, yet so rarely diagnosed as duodenal. Gastric ulcer is far more common in women, and duodenal ulcer more common in men ; but surgical experience indicates that the proportion of duodenal ulcers generally is much larger than has been supposed hitherto. Out of 200 cases operated upon by the Mayo brothers, 87 had ulcers in the stomach, 98 in the duodenum, and 15 in both ; although their earlier experience (1904) gave a much lower percentage of duodenal ulcers. My own experience bears out the greater proportion of duodenal ulcers seen at the time of operation, and causing symptoms apart from perforation, viz. 10 duodenal to 8 gastric, with ulcers in both duodenum and stomach in 3. Duodenal ulcers appear to be the more common amongst the cases coming to the surgeon for gastro-enterostomy, and for that and other reasons the effects of duodenal ulceration may be looked upon as more serious than those of gastric ulceration.

What is the ordinary outlook for cases of chronic ulcer? If the 500 cases of "gastric" ulcer at the London Hospital (1897–1902) be taken as a guide[1] we find that—

10 per cent. died from perforation and peritonitis.
2.5 per cent. died from hæmatemesis.
5.5 per cent. died from other causes.
42 per cent. relapsed.

i.e. 60 per cent. died or were not properly cured. Without taking these statistics too seriously, we may ask for the general experience of physicians, as to what proportion of their patients with chronic ulcer have eventually become quite well and able to pursue an arduous life afterwards? Have 10 to 25 per cent. of them died directly or indirectly from the lesion, as stated by many observers? What proportion of enfeeblement ultimately follows in those who survive? How many develop cancer later on?

An unhealed ulcer of the stomach in later life must be regarded with suspicion as a precancerous condition, a large proportion of cancers occurring by changes in previous ulcers, and at the site of election for ulcers, viz. the pylorus and adjacent lesser curvature of the stomach. In 180 cases in which part of the stomach was resected, cancer on ulcer base was demonstrated in 54 per cent. (Mayo). The frequency of cancerous change in gastric ulcer is at least 50 per cent. (Rodman), and estimates of the previous history of ulceration in cancer cases have varied between 14 and 90 per cent.

In **stenosis,** commonly pyloric, and most frequently due to contraction from ulceration, the effects of gastro-enterostomy are perhaps the most marked. Such cases are associated with **dilatation of the stomach** in variable degree; in some the viscus is atonic and thin, like a flaccid bag, hanging down as low as the pubes; in others there are indications of muscular hypertrophy, which may be very marked towards the pylorus. Visible peristalsis may be present, succussion splash constant, gastrectasis and gastroptosis demonstrable on distension of the stomach,

[1] *Brit. M. J.*, 1902, ii, 1650.

and the condition verified by a bismuth meal with skiagraphy. The vomit is in large quantities at intervals, and of acrid odour, containing undigested food and perhaps sarcinæ. The patient is thin and inactive, the pulse soft and small, and occasionally there are symptoms of gastric tetany. The pyloric ulceration may be multiple, and in such cases, in particular, an inflammatory tumour forms, which is very frequently regarded as malignant. The results of gastro-enterostomy are pronounced and almost immediate, and the haggard wreck soon becomes a plump and industrious individual. In hypertrophic pyloric stenosis of

Fig. 1.
Pyloric ulceration, stenosis and dilatation (benign).

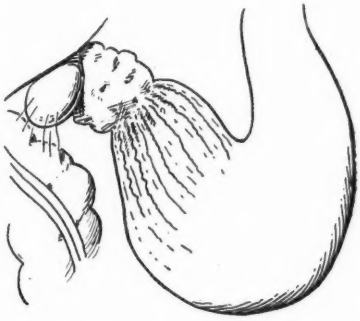


Fig. 2.
Pyloric tumour, ulceration; muscular hypertrophy (benign).

infants, and in partial degrees of congenital stenosis met with in adults, the operation may be employed.

In **recurrent hemorrhage** the indications for gastro-enterostomy are pronounced, for most of those acquainted with the subject agree that no attempt should be made to find the bleeding-point as a rule. I believe such cases are more frequently of duodenal origin. A duodenal origin was determined in five out of six cases for which I have been asked to operate, although hæmatemesis, as well as melæna, had occurred in the majority; and the operation was of lasting benefit. Duodenal ulcer is four times as common in men as in women, and most of my patients

with hemorrhage were males in middle life. Duodenal ulcer has been found in the new-born, and at the age of 94.

Hour-glass stomach, of different grades, is now frequently met with in operations for benign diseases of that viscus, and is usually due to contracture following old ulceration. The proportion I have found to be about 15 per cent., and in two cases stenosis at the constriction was sufficient to demand plastic operation. Marked constriction is an indication for gastro-jejunostomy, the anastomosis being made with the proximal pouch; and at the same time a plastic operation or anastomosis

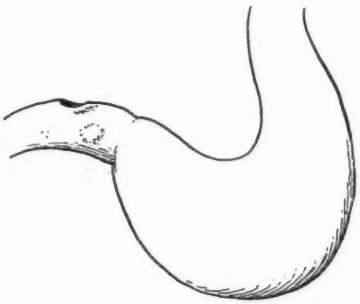


Fig. 3.
Duodenal ulceration with severe hemorrhage.

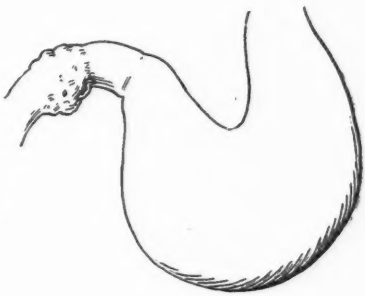


Fig. 4.
Duodenal ulceration, tumour; gastric dilatation.

should be employed between the proximal and distal pouches. Most cases of hour-glass stomach are not diagnosed as such before operation, though the condition may be suspected, and certain tests applied in confirmation.

In **perforations** the indication for gastro-enterostomy is contraction of the pyloric orifice, the perforation being situated in that region. Opinions are somewhat divided as to the desirability of gastro-enterostomy at the time of closure of the perforation, or of leaving it till later. I have performed the simultaneous operation on one patient with recovery, and in another case which recovered after perforation I advised the

patient to come up later for gastro-enterostomy, owing to the amount of pyloric stenosis. In subacute perforations, when old and firm adhesions to the liver have resulted, primary gastro-enterostomy may be resorted to without disturbing the adhesions.

In **gastrectomy,** for malignant or complicated benign disease, the operation is completed by lateral anastomosis of the dome of the stomach with the small intestine, a safer procedure than end-to-end union with the duodenum.

With marked **gastroptosis,** associated with enteroptosis or

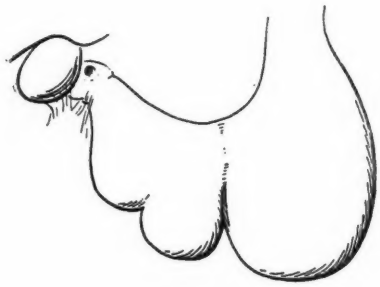


Fig. 5.
Hour-glass stomach. Duodenal ulcer.

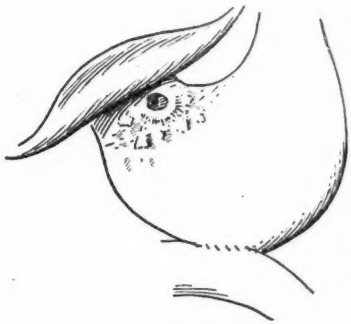


Fig. 6.
Perforated gastric ulcer; gastro-jejunostomy.

nephroptosis, the sagging of the stomach may be so great as to cause symptoms, and contribute to real distress. Such cases have to be carefully weighed, and in one patient, the daughter of a medical man, I fixed both kidneys and performed gastro-enterostomy, much to the patient's benefit. In this case there was a slight degree of simple narrowing of the pylorus (? congenital), and the main symptoms were vomiting and prostration, both being relieved by operation.

Gastro-enterostomy has been employed for **duodenal fistula** in combination with pyloric exclusion, and has been suggested for **gastric tetany.** It has been proposed for acute dilatation of the

stomach, but its employment for this condition is open to criticism.

With regard to the details of the operation for gastro-enterostomy, surgeons of most experience in the operation habitually use clamps for the stomach and small intestine. Some years ago I designed twin stomach forceps, similar to my

Fig. 7.

Author's Gastro-enterostomy Clamp.

intestinal clamps. They are referred to in the latest edition of Jacobson's *Surgery*, but I refrained from previous personal publication of them until satisfied with their use. It should be noted that they are employed without any covering of rubber tubing, and I have not met with any technical defect in their use, or damage to viscera.

In the application of the continuous sutures uniting the stomach and small bowel, I have found a specially designed forceps very useful indeed. The assistant holds them in the *palm* of the hand, and grips each suture as it is passed, close down, to maintain tension on the last stitch as the next is being passed. The forceps being held horizontally, his hand is out of the way, and the tapering points enable any loops of suture to pass readily over them. The springs are much weaker than those of ordinary dissecting forceps, so that they do not tire the hand. After long experience of their use I venture to make them known as useful aids in gastric and intestinal anastomosis.

Some discussion has recently taken place as to the best line of anastomosis, whether anti- or iso-peristaltic. The chief point seems to be to avoid any twist of the bowel round its axis. I

Fig. 8
Suture-holding Forceps.

perform the anti-peristaltic operation of Mayo, and, like him, apply the forceps with the handles towards the operator standing on the right side. Those who prefer the iso-peristaltic, or vertical disposition of the bowel, apply the forceps with the handles towards the assistant. The experiences of the one group are quite the opposite to those of the other group, and I think the application of the forceps, from one side or the other, explains the difference. Personally I employ my forceps in the same way as Mayo employs Doyen's forceps, and make an antiperistaltic union with similar satisfactory results, and see no reason to revert to iso-peristaltic, as Moynihan (who applies forceps differently) has done.

The advantages of removing mucous membrane were first brought to the notice of the profession by Littlewood,[1] and I have adopted this procedure with various modifications.

[1] *Lancet*, 1901, i, 1817.

A FAMILY WITH A CONGENITAL DEFORMITY OF THE NOSE, AND THE RESULTS OF SUBCUTANEOUS INJECTION OF WAX.

BY

E. H. E. STACK, M.B., B.C., F.R.C.S.,

Surgeon to the Cossham and Orthopædic Hospitals;
Assistant-Surgeon to the Bristol Royal Infirmary and Bristol Eye Dispensary.

SINCE its introduction by Gersuny, there has been much written on the injection of paraffin for cosmetic and other purposes, and a good deal of discussion as to what melting-point at which the wax is best used. Many operators still advocate a wax which requires to be heated before it is injected. This is a troublesome method, as the wax cools so quickly when it runs down the needle and into the tissues; it is also more difficult to limit its situation to the point required. Downie, who has done a large number of cases, uses an electric current to keep the needle hot. Others use quite a hard paraffin of the consistency of a candle, and without heating it, inject by considerable pressure. Three years ago I saw in the clinic of Gersuny in Vienna a large number of cases treated with wax, which had a melting-point of 35–40° C. At ordinary temperatures it is about the consistency of soft butter.

Gersuny now prefers this to harder or softer varieties. It does away with the trouble of keeping the wax hot while it is being put in on the one hand, and of having a special apparatus for the hard paraffin on the other. The technique is simple. The skin is cleaned, and the needle with a cocaine syringe is put in and a few drops injected. The syringe is taken off the needle, and the wax syringe (loaded) is screwed on instead. The wax is then gently forced into the tissues, which are held between the finger and the thumb of the hand. The amount injected depends on the result required. It is better to inject several times than run a risk of putting in too much at a time. When the skin

become anæmic, no more should be injected at that time. The looser the skin is the better will be the result. No anæsthetic is required. I have never had a patient who found the pain more than they could bear quite easily; in fact, I often do it without putting in any cocaine first. The needle can be moved from place to place as it is wanted till the proper contour of the part is reached. There seems to be no tendency for the wax to wander after the injection. It is now twenty-one months since the first of the noses I have shown was done. The patient has the same silhouette in profile now as then, and does not consider that any alteration has taken place.

I have injected several cases because of the difficulty they had in getting spectacles to sit on a depressed nose, and the results are satisfactory. They must, however, be careful not to have the bridge of the glasses too thin nor pressed too tightly against the skin. Many normal noses mark and even get sore with the pressure of the bridge of their glasses, and this is rather more apt to occur when there is wax, especially for the first few months. One patient (a cornet player) came to me on account of a depressed scar in his upper lip, the result of an old suppurating sebaceous cyst, which interfered with his proper lipping. I divided by subcutaneous puncture the fibrous band which bound down the skin, and a week later put in a tiny drop of wax with a very fair result, but I did not put in quite enough wax, and he is anxious to have a little more injected. The first case of a depressed scar I did was a patient who came to the Royal Infirmary for a strangulated hernia. He had a very ugly long scar on his chin, and seemed highly delighted when I offered to improve it for him, which I did. I heard afterwards that he was often "wanted" by the police, and so I am not surprised at his eagerness to have such a good identification mark removed. Scar cases should be done at two sittings. First dividing the cicatrix, and when this has healed injecting the wax. If the wax be put in at once it is liable to flow out through the hole made by the scalpel in releasing the scar. The effects are best watched if the needle be brought under the skin from some little distance. I have at present a case of small-pox pitting which I hope to show the Society next year. She is

having first a course of massage to stretch the scars. The wax in these cases should be softened a little with some olive oil before injection. I believe the wasting of the socket after excision of an eye has been much improved by injection. In case anyone is interested in the future of the wax injected, I have put under the microscope a specimen of the wax before it is injected—it shows the usual needlelike crystals—and also a drop which I let out of a lip this afternoon six weeks after injection. The wax is there in very fine globules about the size mostly of red blood cells, some of which are seen in the field. Other cases which I have seen benefited are the cases of hemiatrophy of the face which Gersuny has published, flaccid elbow joint after excision, poor development of one side of the lower jaw, prolapse of the rectum; but of these cases, although there have been some good results, there have also been several published where extensive suppuration has taken place along the wax planes, and I do not think I would be anxious to use it in such a case. For cases where too much wax has been put into a nose, or where it has been put in a wrong spot, Gersuny has a number of instruments which he uses to remove it, cutting only the mucous membrane; with these one can also remodel a nose which the owner thinks is of too marked a Roman or Semitic type. There have been reported in Germany several cases where men have had themselves injected with wax in order to form tumours, and so avoid conscription. They have presented themselves at surgical clinics afterwards to have the masses removed from the scrotum, neck, &c., after it had served its purpose. One might, therefore, classify "the parafinomata" into unsurgical, unsightly and unpatriotic!

Turning now to the very interesting family of which I have shown you so many examples, I would like to have suggestions as to their pathology. They are all of the same type, though of a different degree. The eyes appear to be widely set, showing a tendency to epicanthus. The nose is extraordinarily broad, especially at its root. Fig. 1 shows a transverse section of one of these noses near the root, and of a normal one in the same situation. To describe its appearance, one might say that it looks as if the nasal process of the frontal bone had grown down

between the nasal bones and separated then by a centimetre or more; this width is carried down to the tip, and there is no bridge. Just above the tip there is a pit or slight dimple, and in some cases this pit is almost the only evidence of the deformity. (*See* Fig. 3.) I have not been able to make out anything from skiagrams. Some few of the cases have chronic nasal catarrh, and

Fig. 1.

one has some ozœna from crusting. I have not been able to find references to any deformity of the sort; but I feel sure that such a marked condition must have been noticed before. Going into the family history, one finds, as shown on the genealogical chart, that the condition is known to be present in four generations. The youngest case, aged two years, is one of those you have seen downstairs, and is, perhaps, the most marked of all. Out of the forty persons in the tree, eighteen (viz. those surrounded by the

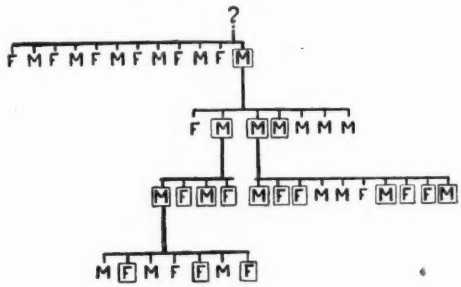


Fig. 2.

square) are the affected ones, nine are males and nine females; in most of them the deformity is well marked, but a few have only the dimple, although all show the broad nose. I have operated on nine out of the sixteen, and they are all very pleased with the result. I have not made up my mind yet with regard to the children as to when they ought to be done. I believe an operation

to diminish the width of the nose would be successful, but I am at present a little loath to suggest it, as one could not be quite sure of the result. If I get a chance with a very young baby I will certainly try moulding. I may mention here that the deformity is quite noticeable at birth.

There is no female member of the family married (at present), and so one cannot say whether the deformity is more liable to pass through males or females. There is another curious feature about some of the cases, that is the deficiency of the hair in some of the children. They seem to grow out of it; but you see in the case to-night—who is two years old—she scarcely has any hair, and her elder sister is only just beginning to grow hers. I should be much obliged if anyone comes across a reference to a family

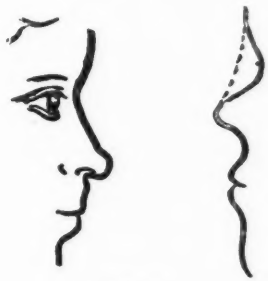


Fig. 3.

of this sort if they would let me know. The unaffected members of the family do not show any deformity, nor is there anything noteworthy about their appearance. The only suggestion I have to make about the pathology is that the suture between the two halves of the frontal bones closed late, and allowed the processes to be situated too widely apart. The mother of one family says that in some of the children there was a beating in the forehead just above the nose, and this would bear out the theory. It would have been interesting if one of the cases had had a frontal meningocele. The chart shows that the disease began with the youngest in a family of twelve. The sex of the other members of that family is not known, so I have put them alternately male

and female, After this case there are four families. In two of these the percentage of abnormal to normal is 40, in one 100, and in the fourth 70. The case does not, therefore, fall into line with the dominants and recessives of Mendelism. The diagrams show (Fig. 3) the new line of the silhouette taken as a shadowgram before and after operation.

A CASE OF LEAD ENCEPHALOPATHY.

BY

J. ANGELL JAMES, M.R.C.S., L.R.C.P.

I AM recording the notes of this interesting case for several reasons. It is a most uncommon condition. Out of 2,448 cases of plumbism reported during the last four years under the Workshops and Factories Act, only 84 were cases of encephalopathy; and Janquerel, the French physician, in his clinic reports 1,217 cases of colic, 101 of palsy, and only 72 of encephalopathy, of which latter 16 died, probably a small proportion.

It is a most serious condition, in which alarming symptoms may develop rapidly, and in which the diagnosis is not always clear, unless there is a definite history or unmistakable signs of lead. The cause in this case is unique. I have written to the Chief Inspector of Factories, and I cannot find that a similar case has been reported before.

This was a case of a young woman, aged 16—(young women are more susceptible to the action of lead than other people, and the poisoning in them more often takes the encephalic form)—who had been for the last two years "an artist colourist," an industry that has not been worked in England long, but has been in existence in Paris and Vienna for some years.

The process consists in painting the different colours on black and white prints, and is done by young girls from copies. The pictures when finished are sent abroad for sale for post cards,

almanacs, etc. This particular girl was rather skilled, and for the last twelve months had been working with a particular white paint called "Blanc d'argent" (made by a Paris firm), and containing lead carbonate. The other white paint used, "Chinese white," contains zinc oxide. The peculiar effect of the former is a silvery appearance, it stands out in contrast to the rest of the picture, and adds much to its effectiveness, and is put on after the painting is done. In this case the poison was introduced into the system through the mouth, the girl having a habit of sucking her brush to get a better point.

The symptoms were most interesting and unusual. For some months prior to the time when I first saw her she had been in indifferent health—headache, sickness, constipation, a bad taste in the mouth and lassitude were complained of. Her temperament changed also: instead of the lively, bright girl she used to be, she became restless, irritable, nervous, did not like to be left alone and frequently suffered from nightmare.

I saw her first on October 29th, 1908. A strong, well-developed girl, a sallow tinge about the complexion, which was naturally bright, a very marked metallic odour about the breath, a distinct blue line along the gum, the teeth were of good colour and well kept. She had spent the last three or four days lying down, during which time there had been no action of the bowels and almost incessant vomiting; the vomit was yellow in colour and had a feculent odour. Pulse 75, temperature normal, there was slight retraction of the abdomen and a little tenderness; in fact, all the symptoms pointed to a diagnosis of plumbism.

The constipation was overcome by means of enemata, the first was not very successful, but much better results followed next day, and the treatment was continued for the next three or four days. Although the bowels were acting the vomiting continued; the only thing that could be retained was a little milk and soda. She was very restless, and would not be left alone a moment; had very little sleep.

On the fourth day she became drowsy, and complained of intolerance of light. This was followed after some hours by

a general epileptiform convulsion, which lasted about five minutes, and again in three or four hours' time by another convulsion, more severe in character and lasting longer. There was no return of consciousness after the first fit. She remained practically unconscious for the next twenty-four hours, during which time she was seen by Dr. J. R. Charles.

She lay on her back and side with her head retracted and her legs drawn up. She resisted attempts to examine her. All her reflexes were present and slightly exaggerated; pupils were equal, rather dilated and sluggish; urine was passed involuntarily; breathing rather irregular; pulse 66; temperature slightly raised, and remained so for several days, but never reached 100 F. On the following night she had another convulsion, which was less severe. The unconsciousness remained more or less complete for another twenty-four hours, during which time she could be occasionally roused to take a little nourishment. She was very restless, frequently groaned, and vomited at intervals, after which she slowly improved, and symptoms gradually passing away, she was able to get up in a month, and was practically well at the end of three months. At the present time she has no symptoms of any kind.

Digestive System.—The vomiting, which was so incessant at first, disappeared at the end of a fortnight. The constipation was more difficult to overcome.

There was only the single blue line (Burton's) on the gum.

Urinary System.—There was a little albumen at first, but that had disappeared by the end of a fortnight. Urine was passed involuntarily from the commencement of the first fit for the next three or four days.

Menstruation.—There was complete amenorrhœa; menorrhagia is the usual condition.

Limbs.—There was a good deal of pain complained of, especially in the legs, and painful cramp in the calf muscles, which seems to be more common in young people in plumbism than older people. These symptoms lasted two or three weeks. When she first got about there was a slight weakness of the right leg,

and the foot was dragged in walking, and slight difficulty at first with the left hand in playing the piano. No paresis otherwise of the muscles of the limbs.

Nervous System. — The headache was severe, especially frontal and occipital, with retraction of head and stiffness of neck, the pain at the back of the head and neck being greatly exaggerated on any movement, suggesting some meningeal mischief, and confirming the theory of Mosny (of Paris) that the pain was due to acute saturnine meningo-encephalitis. This condition was also especially noticed by Dr. Jefferis Turner in his series of cases of lead poisoning in children in Queensland,[1] and by Dr. Lockhart Gibson in his series also in children.[2] At the time of the convulsions all the reflexes were present and slightly exaggerated. After a few days the knee-jerks became weaker and remained so for several weeks, gradually recovering. There was marked right ankle clonus, which disappeared after six weeks.

Ocular Symptoms.—Pupils were always equal, though in the early part of the illness they were dilated and sluggish. After the convulsions, and when consciousness had returned, double convergent strabismus was noticed; this was due to complete paralysis of left external rectus and paresis of right. This paralysis of the external recti appears to have been first noticed by Lockhart Gibson, and published by him in a paper he wrote in 1897 in the *Australasian Medical Gazette.* In addition, there was at first sight general amblyopia, which very soon disappeared, leaving only a left temporal amblyopia, the outer half of the field of vision of left eye being quite cloudy. This eventually cleared up. There was no optic neuritis. Hare says that frequently in transient cases there are no ophthalmoscopic changes to be made out.

Treatment.—The only treatment when medicine could be taken was small doses of iodide of potassium, it was not deemed advisable to give large doses for fear of liberating too much free lead in the system, and so aggravating the symptoms in the acute stage; an ice bag at that period gave considerable relief.

[1] *Brit. M. J.*, 1909, i, 895. [2] *Ibid.*, 1908, ii, 1488.

But there was no indication either for bleeding or injection of large quantities of artificial serum, as recommended by the French physicians.

CRETINISM AND THE PUERPERIUM: SEQUEL TO A RECORDED HISTORY.[1]

BY

DAVID A. ALEXANDER, M.B.

I SAW Mrs. M. H. for the first time at the end of October, 1908, when she was in the seventh month of her fourth pregnancy, and expecting her confinement in January.

She was twenty-six, of slight physique, rather sallow complexion, cheerful and intelligent expression. Inquiry into her present and past history elicited the fact that she had been accustomed to take thyroid extract.

She gave the following account: She had recently come to Bristol, having been born and brought up in Edinburgh. She had good health and was counted a quick child until the age of ten. Then she stopped growing and became dull, and her friends, concerned on her behalf, took her during the next four years from doctor to doctor; and although by one at least, she understood, the nature of her complaint was recognised, treatment was not efficiently carried out. While casually attending the out-patient department of the Edinburgh Royal Infirmary, she attracted the notice of Dr. Byrom Bramwell. Admitted an in-patient, thyroid extract was adequately administered, and she began to recover energy, intelligence and growth.

After her dismissal its use, in frequent courses, was continued, and with success. She quickly passed from childhood to adolescence, and at the age of twenty she entered the married

[1] Read at a meeting of the Bristol Medico-Chirurgical Society, April 14th.

state. It had been her experience that her need of the extract had continually lessened; dryness of the skin was the first of the symptoms to guide her. In her three previous pregnancies she had taken it, but not more frequently than at other times, and since the beginning of the present pregnancy she had required none. Of her three children the first and the third were alive and healthy, the second had suffered from a wasting disease, and had died of "meningitis." Further examination disclosed no signs of myxœdema, although the thyroid gland could not be felt; neither were there any of the symptoms of renal toxæmia associated of late with thyroid insufficiency. The urine, when examined, proved to be normal. Sickness in the early months of gestation had not been excessive, and everything pointed to a normal completion at term.

Summoned to see her at the end of December, in the beginning of the ninth month of her pregnancy, I found her in circumstances of some discomfort, as she had been changing her lodgings. There had been a profuse uterine hemorrhage, the cause of which could not be determined; the placenta was not involved in the os; labour was in progress, the head presenting, and with little delay a male child was born, without mechanical interference or perineal laceration.

During the first week of the puerperium the patient's condition was all but wholly satisfactory — lochia scarcely offensive, a temperature oscillating one degree, the skin somewhat dry, occasional fugitive pains, something of weariness and apathy— slight as those symptoms were, they gave an emphasis to the patient's desire to resume thyroid extract, the eliminant action of which upon skin and kidneys could not but be advantageous.

On the eighth night delirium was reported; on the ninth evening occurred a rigor, with temperature of 105, and pulse rate upwards of 130. The condition on the tenth day was reassuring; on the following the skin became icteric; on the twelfth the jaundice was intensified, and accompanied by numerous petechiæ. The typhoid state supervened. She was now admitted into Cossham Memorial Hospital, under the care of Dr. Bertram Rogers, but not before the appearance of venous

thrombosis of the left leg, (purulent) synovitis of the left knee, and subcuticular abscesses in pressure areas, attested a puerperal pyæmia. She died on the fourteenth day.

No autopsy was obtainable, so that it was impossible to ascertain the exact state of the thyroidal system, or its relation to recent morbid changes. The latter had probably been of the usual type. If the early symptoms, including the hemorrhage in parturition, had actually been expressive of athyroidea, there was, perhaps, room for taking the icterus to be that of one of the graver forms of the liver derangements of pregnancy. There had been, however, no diminution in liver dulness, and the scanty urine yielded neither leucin nor tyrosin. Of the occurrence of yellow atrophy in the puerperium, examples [7] are not wanting to supply an exception to Rokitansky's observation that "the severe jaundice affecting women during the puerperal state is always dependent upon pyæmia, and never upon an appreciable derangement of the liver."

Dr. Byrom Bramwell, with whom I communicated, kindly points out the earlier record of the patient in his work, *Anæmia, and Diseases of the Blood-Forming Organs and Ductless Glands*[1] (p. 371). He describes the case as one of juvenile myxœdema, using the term in contradistinction to cretinism, in which the greater defect and deformity are due to the same morbid process, beginning in infancy. The family history included phthisis, insanity and convulsions. The patient had measles in childhood, herpes zoster in her twelfth year (after the onset of myxœdema). When she stopped growing, at ten, permanent dentition was backward. Myxœdema was already developed before intelligence flagged. As to the features, the nose and nostrils were flat and wide, and these features persisted in later life, but without the grossness of cretinism; and in this type her children resembled her. The hair was scanty; after recovery it became luxuriant, and so remained, a proof of good integumentary nutrition.

The menstrual cycle, once established, had since remained normal. The patient responded to treatment in some six weeks, and the extract then administered was what she had since taken, never exceeding five grains three times daily.

No thyroid gland could at any time be felt. But one cannot think that it was absent during her early years of growth, or that if it had been wholly lost by a destructive lesion she could afterwards have done without her supplies for long periods together. But a gland, always small and feeble, may have exhibited[2] temporary and relative insufficiency, and, with narrow limits of activity, may have required frequent reinforcement from without.

The recent application of thyroid extract to the toxic disorders of pregnancy tends to foster the impression that child-bearing must necessarily aggravate athyrea. But exceptions have been observed, and several are cited in the Clinical Society's report upon myxœdema.[3] An explanation of the anomaly is offered by the theory of vicarious fœtal thyroidisation, and I am indebted to Dr. Edgeworth for calling my attention to it in connection with the present case. Operating upon bitches, Halsted found that the thyroidal system could be almost wholly extirpated in the pregnant animal without ill-effects; and that in the puppies, born at term, the thyroid glands were enlarged. Edmunds[4] corroborated these experiments, and satisfied himself that the increase in the size of the gland in the young was compensatory, and presumably due to the functional activity imposed upon it by the maternal deficiency.

For the proof of such fœtal activity in any case one would look for enlargement in the gland of the child. In the present case it must be said that it was not apparent; there was nothing unusual in the infantile contours of the neck.

It would also seem to follow, in such cases, that with the loss of her supply, on the completion of pregnancy, a mother might be liable to acute symptoms of myxœdema.

As to the sequence of disease in mother and child, as observed in areas of endemic cretinism, it is to be remarked that both are simultaneously exposed to the same causative agent—an organism,[5] perhaps, which destroys the developing gland in the unborn child, or is transmitted to the infant in the course of lactation.[6] These consequences were not to be expected in this instance.

After-histories in the recovery of cretins, as yet, can be but few, and as a contribution to the subject these particulars are recorded.

Discussion.—Dr. EDGEWORTH asked if the infant, which had been born, had enlargement of the thyroid gland. It had been shown that bitches with half the gland removed had pups with large thyroids. Possibly the woman had been able to do without thyroid extract during pregnancy because the child had a large thyroid, the secretion from the child's thyroid being sufficient both for the mother and child.—Dr. ALEXANDER replied that the infant's thyroid was not enlarged.

REFERENCES.

1 Bramwell, *Anæmia and Diseases of the Blood-Forming Organs and Ductless Glands*, 1899, p. 371.

2 Berry, *Diseases of Thyroid Gland*, 1901: chap., "Atrophy and Hypertrophy."

3 *Tr. Clin. Soc. Lond.*, Report on Myxœdema, 1888, xxi, sheet 8.

4 Edmunds, Erasmus Wilson Lecture, 1901, *Lancet*, 1901, i, 1317 *et seq.*

5 McCarrison, "Cretinism in Gilgit," *Lancet*, 1908, II, 1275 (*cf.* Seligmann, *J. Path. and Bacteriol.*, 1904, ix, 311.)

6 Tedeschi, *Lancet*, 1908, i, 1310, "Cretinism in Italy."

7 Sturmer, "Atrophy of Liver with Jaundice," *J. Obst. and Gynecol. Brit. Emp.*, 1903.

A DISCUSSION[1] ON "TREATMENT BY IONISATION OR CATAPHORESIS."

OPENED BY

H. P. TAYLER, M.A., M.B. Cantab.,

AND

H. LEWIS JONES, M.A., M.D. Cantab., F.R.C.P.,

Medical Officer in Charge of the Electrical Department in St. Bartholomew's Hospital, London.

DR. H. P. TAYLER opened the discussion with the following remarks:—

At a recent clinical evening of the British Medical Association so much attention was drawn to a case of rodent ulcer which

[1] Held at the meeting of the Bristol Medico-Chirurgical Society, May 12th, 1909.

had been treated by zinc ionisation that I thought it might be of interest if I related the history of several cases which I have treated by ionic medication, and gave an account of the technique of the treatment.

As my first case was one of rodent ulcer, perhaps I may best begin with these, and I will mention them in the order of their importance, rather than in the order of the dates of their occurrence.

Case 1.—A male, aged about 50, had a rodent ulcer, about one third of an inch in diameter, on the right temporal region. It had existed for two years, giving rise to annoyance by bleeding when rubbed with a towel. It was treated by ionisation with a zinc electrode, a current of 10 ma. being passed for ten minutes. In fourteen days a dry scab peeled off, and the ulcer had healed, and now, eleven months later, it remains healed.

Case 2.—A lady, aged about 55, had a rodent ulcer, $\frac{7}{16}$ in. in diameter. This caused similar trouble, owing to the bleeding, and had also existed about two years. It at once responded to treatment, and after two sittings, using a current strength of 12 ma. for twenty minutes, the ulcer had healed. But although the ulcer healed kindly, the hard raised edge did not disappear, and after five sittings at intervals of three weeks, it was still distinctly in evidence. I therefore attacked it with a zinc needle, puncturing it in four different places, with a current of 2 ma. running for two minutes. Two such sittings caused this thickening to disappear, and the face, now four months later, remains smooth.

Case 3.—An elderly man, with a rodent over the right malar bone. This patient was an alcoholic, and it was very difficult to get him to bear the pain of the treatment. I began with 3 ma. only, but by the fifth sitting I got him up to 15 ma. The ulcer was soundly healed, but the edge was not smoothed away when he discontinued attendance.

Case 4.—A male, aged 69, had had a rodent ulcer, $\frac{5}{16}$ in. by $\frac{1}{2}$ in., for some months. After one treatment, in, July 1906, the ulcer healed, and remained healed until the following December, when it broke down. Two doses of about 3 ma. for thirty minutes caused it to heal again, but after a month it again broke down, and eventually he went to my friend, Dr. Reginald Morton, who excised the ulcer, and treated the wound with X-radiation. It remains healed at the present time.

Case 5.—A male, aged 40 years, came with a rodent ulcer extending the length of the left lower eyelid. He was greatly distressed, as he had been told that he must have the whole eyelid cut away. Two applications of 7 ma. for ten minutes caused the

ulcer to heal, and he is still under treatment to endeavour to remove the indurated edge.

Case 6 is interesting in showing what zinc ions can do in an absolutely hopeless case. The man, whose photograph I show you, came under my care because he was suffering intense pain in the head. I found the pain was caused by the ravages of an enormous rodent ulcer, which had eaten away nearly all the concha of the ear and the side of the face, and involved his facial nerve, causing paralysis of that side of the face. I attacked it with zinc ions, more in the hope of cleaning the surface and reducing the horrible fœtor of it than anything else, but was very glad to find that the treatment relieved the pain, and enabled him to get up and move about again. He had for several weeks been confined to bed, and could only swallow liquids. I worked away for twelve weeks, giving a ten-minute sitting to some part of the ulcer each day, with the result that the diameter of the ulcer was diminished by one inch in each direction. After the first few applications a large part of the ulcer became so clean that I was able to get some grafts to live on it, his power of swallowing solids returned; his strength improved so that he could walk a mile. He returned to his home at Southampton, and I lost sight of him, but I heard that he died about three months later, probably, I think, from septic poisoning, which found entrance in what was left of the external meatus. I should like to insist that the time and trouble of the treatments were well repaid by the freedom from pain and the cleaning up of the ulcer which they occasioned.

Case 7 is rather disappointing, inasmuch as it is not absolutely healed at the present moment, but is very instructive in showing how the disease can be kept in check, even when it cannot be entirely mastered. A lady, aged 44 years, first consulted me about a rodent ulcer of the right cheek, in November, 1901. She refused all operative interference, and it was treated by the static effleuve, by X-radiation, and by radium bromide until June, 1905, when, on Dr. Lewis Jones's advice, zinc ionisation was begun. Improvement at once showed itself, and the ulcer, which measured 41 by 20 millimetres was firmly healed after twenty-one sittings. This I reported at a meeting here in Bristol in August, 1906. Since then there have been small extensions of disease just where the funnel of the ear joins the face, the result of which has been to separate the lobe of the ear in rather an unsightly manner; but the disease is held in check, the face is free from pain, and the scar tissue covering the site of the large ulcer is wonderfully soft and smooth.

These are cases for which I think credit may be claimed for zinc ions; but before leaving the subject of rodent ulcer I should like to relate one other case—a man, aged about 70 years, who had

an ulcer at the inner canthus of the right eye. It was treated with zinc on five occasions, without the slightest improvement. I then excised the ulcer, and the pathologist reported it to be a squamous epithelioma. It is interesting to see that although the ulcer looked just like a rodent, it was not rodent, and it did not respond at all to the zinc ions.

On two other occasions zinc ions have been of use to me.

A lad, suffering from granular lids, had been for some time under treatment by having them rubbed with mitigated stick, until it was hard to say whether the patient or the doctor was the more tired. One application of 1 ma. for two minutes caused such an improvement that he went to work, and states that his eyes now give him no trouble.

The second was an old lady, with a patch of lupus, about 2 in. by 4 in., on the back of the left hand and wrist, sent to me for X-ray treatment in July, 1907. She was so feeble that after four treatments she could no longer bear the walk to my house. I therefore attacked it on nine occasions with zinc ions. The effect was to clean up the ulcers and prevent the formation of fresh foci, and after long dressing with either a solution of zinc sulphate or an ointment of oleate of zinc healing of nearly the whole surface took place. Then the patient developed an acute nephritis and died. However, she practically died cured as far as her arm went.

As an instance of the use of salicylic ions, I may quote the case of a young woman, aged 34, who had, in December, 1907, an acute neuritis of her right brachial plexus, which subsequently involved the left plexus also. She was treated off and on until July, 1908, with the constant current, each application of which gave some days of ease and nights when sleep was possible. For a recurrence of pain, September and December, 1908, she was treated on eleven occasions with a static breeze. This, like the constant current, gave temporary relief, but did not effect a cure. So, in January of this year, I started to drive in salicylic ions, using a pad large enough to cover the plexus in the neck and a current of 20 ma. for half an hour. The first application gave most encouraging results, and after eight sittings she declared herself well. No drug treatment was associated with this.

One other case I should like to describe. It is of great interest to me, but, unfortunately, I am not able to record the absolute cure of the patient. She is a nurse, aged 27, who in July, 1908, complained of pain in the left ear. This pain was considered to be neuralgic until September, when a discharge was noticed, and an ulcer formed inside the pinna. In October the Lœffler bacillus was found in the discharge, and the patient spent four weeks in an

isolation hospital, where the ulcer healed and she was discharged. A fortnight later the scar broke down and has remained unhealed ever since. She has been treated with large doses of antitoxin, and on two occasions the ulcer was scraped under an anæsthetic, and swabbed with a solution of lactic acid. It has also been treated with pyocyaneus and hydrogen peroxide. On April 15th my friend, Dr. James Pearse, asked me if I thought ionic medication would do any good. I got a report that the Lœffler bacillus was still found on cultivation from the discharge. On April 19th I gave an application of copper, using a current of 7 ma. for ten minutes. As the patient was frightened by the battery, this was as strong a current as could be borne. On April 22nd the crust which had formed became loose, and was easily lifted away. The surface of the ulcer looked clean, and the greater part of the edge appeared healing. On April 27th, as a crust had again formed, I gave a dose of 10 ma. for ten minutes. This again cleaned the ulcer, and healing went on. On May 8th the ulcer was divided into two by a band of epidermis across its floor, and as I thought, owing to its position inside the pinna, a bit might have escaped the copper ions, I bent out a cup-shaped electrode to fit more accurately the inside of the pinna, and gave another dose of 10 ma. for twelve minutes. To-day the ulcer has a crust over a good part of it, but it shows a healing edge where uncovered.

I have been much puzzled as to the best dressing to apply between the sittings. Obviously, a wet dressing kept on with a pad of wool and a bandage converts the ulcer into a first-class incubator, so I used wool which had been soaked in 2 per cent. copper sulphate and dried, packed into the pinna. A crust still formed, so I tried the effect of a wet dressing. The crust still formed. I should be glad of any suggestion as to the best way to dress the ear.

These are the cases which I wish to describe to you.

It remains to describe a little more fully the technique of the proceeding.

The requisite instruments are a constant current battery capable of driving a current of 30 to 40 ma. through the human body, a milliampère meter capable of reading the above current, and suitable electrodes and connecting wires.

Personally, I prefer my battery to be made up of Leclanché cells, as I find these are the easiest to clean up and replace in case anything goes wrong when far away from instrument makers. The milliampère meter I prefer is the variety in which the needle floats in spirit, as this saves all troublesome levelling of the

instrument or battery. The electrodes must be cut to shape, so as to just overlap the edges of the surface to be treated. The larger the indifferent electrode the better, but I find a cylinder of sheet zinc one inch in diameter and covered with four thicknesses of flannel very useful, as the patient can hold it in a basin of water, thus preventing the annoying drying which so often takes place when a pad on the back is used.

We will suppose that a rodent ulcer of the face is to be treated. The patient is placed lying on a couch, with the head supported so that there can be no jump when the current is switched on. Any greasy application which may have been put on the ulcer and surrounding skin is carefully removed. A suitably sized electrode of zinc is selected and carefully polished. I find the best way to arrange my electrodes is to have a holder such as I show here, made from a bit of brass tube of a size just sufficient to allow a No. 7 brass screw to slip into it and be firmly held. To the head of this screw a bit of ordinary roofing zinc, which can be easily bent to shape with the fingers and cut to size with ordinary scissors, is soldered. Thus, at practically no expense any number of electrodes can be quickly made.

A pad formed of at least sixteen thicknesses of lint is then soaked in a 2 per cent. solution of zinc sulphate, and laid over the ulcer; the polished electrode is placed and held on this with gentle pressure, after having been connected with the positive pole of the battery. It is well to test the poles of the battery pretty often, as the shifting of a current reversing in dusting is easily overlooked. A bit of wet blue litmus paper is reddened at the positive pole.

The patient grasps the pad connected to the negative pole, and the current is slowly switched on. It is now necessary to pay attention to the dial collector, and see that the collecting arm works smoothly and touches the record stud before it quite leaves the first, so that the rise of current takes place without any jerk. For the same reason it is very essential to see that all connections of battery cords and electrodes are quite firm. Professor Leduc insists that all connections should be soldered.

The absolute strength of the current must be fixed by what the

patient can bear. but may be taken to be 2 or 3 ma. per square centimeter of surface.

The length of the sitting is also fixed by the tolerance of the patient ; but supposing the current to be about 3 ma. per square centimeter, ten minutes to a quarter of an hour will probably suffice.

It must be borne in mind that the quantity of zinc driven in, and the depth to which it is driven, will vary directly with the time and current strength.

After an application I leave the pad which has been used during treatment as a dressing, partly to avoid disturbance and the providing of another dressing, and partly with the idea that there may still be some charged ions left in it.

If the ulcer is looked at after the treatment the surface will be seen to have turned a pearly white, while the skin around is reddening. This reaction passes off in about forty-eight hours, and the ulcer looks clean and takes on a healing action. I find it best to allow three weeks between treatments, and to use a simple dressing, such as lotio rubra, during the interval.

When breaking the current it is necessary to evenly and gradually reduce the strength, else painful shocks will be caused.

I would repeat that the electrode must be polished quite brightly before each application, and I find this is best done with a bit of the finest glass-paper used by cabinet makers.

Dr. LEWIS JONES said it gave him great pleasure to speak on the subject of ionic medication, because he might claim to be the godfather of the method in this country, and the method was one well worthy of attention.

He wished, in the first place, to congratulate Dr. Herbert Tayler on his excellent paper, and as that paper had been mainly concerned with the clinical aspect of ionic medication, he (Dr. Jones) would like to say something of its scientific side.

Dr. Lewis Jones then arranged an experiment to demonstrate the migration of ions under the influence of the electric current. A circuit was arranged through a number of layers of parchment paper, formed by folding a long strip upon itself many times ;

they were moistened with a dilute solution of sulphate of soda, and also contained a trace of phenolphthalein, and were placed between copper electrodes.

Under these circumstances the passage of the current would cause a movement of ions of copper into the paper from the positive pole, the source of these copper ions being the metal of the positive electrode, so that if copper were subsequently found in the pores of the paper it must have been derived from the electrode, and carried into the parchment paper with the current.

The current was started at 14 milliampères, and allowed to flow for twenty-five minutes. The strips of paper were then unfolded, and on the side of the positive electrode the copper was shown to have penetrated to a considerable distance by treatment with potassium ferrocyanide, which gave the brown colour characteristic of the presence of copper. At the negative pole no copper had entered the paper, but there was a purple stain due to the interaction of the phenolphthalein with ions of hydroxyl, which had penetrated inwards through many layers of the paper, starting from the negative pole. The ionic movements set up in the experiment were, therefore, entirely different at the two poles.

The principles of ionic medication depended upon this influence of a current in producing a penetration of the ions of active drugs into the skin and subjacent tissues.

The effects of ionic medication were superior to those obtainable by means of lotions and ointments, by reason of this penetration, for these externally-applied lotions, etc., penetrated only very slightly, and if there were germs growing within the substance of the cells these were practically untouched by ordinary external applications ; but with the aid of electricity such intracellular medication could be obtained, and might make considerable difference in the result, and there were many disorders in which the power to introduce a drug by ionisation might be of great value, so that in ionic medication they had a new weapon. It remained to find out the fields of action in which ionic medication could be most usefully applied.

In the choice of chemical bodies for ionic medication one must know something of the ionic properties. Thus, chlorine as chlorine

water was a strong bleaching agent, but chlorine ions have not this property. The chlorine ion, therefore, could not be used for oxidising and disinfecting purposes, as these were properties of the concentrated chemical, but not of its ions, for chlorine ions were abundant in normal saline solution, or in the juices of the body. Strychnine, on the other hand, had definite ionic properties, and was an ion capable of introduction into the body by means of a current, and of producing its well-known physiological actions. Carbolic acid was an alcohol, and did not dissociate into ions when dissolved in water. All neutral salts which were soluble in water formed ions when dissolved, and the same was true of acids and of alkalies. Examples of ions useful in medicine are those of zinc, copper, magnesium, quinine, cocaine, strychnine and salicylic acid. The properties of many other ions remain to be discovered. Only a few have yet been handled, and those mentioned have been found useful.

In the skin the ions enter quite well for a little distance, but when they reach the interior of the body some undergo chemical changes which put them out of action. Nearly all the heavy metals form insoluble phosphates, and are deposited as such in the tissues, and penetrate no farther with the current.

In the case of zinc, this has a slight advantage over the other heavy metals, in that its phosphates are not entirely insoluble. Mercury and silver are metals which do not readily lend themselves to ionic medication. Silver ions are put out of action when they meet chlorine ions. Thus silver is only useful for the most superficial affections, as it is precipitated almost at once as a chloride. If mercury ions are used, gold electrodes amalgamated with mercury must be employed as the source of the mercury.

Practically all metals must be introduced from the positive pole.

Even if ionic medication were suitable only for quite superficial purposes, there would yet be a considerable field for its application. It has been found useful for skin affections, such as lupus, lupus erythematosus, rodent ulcer, septic and tuberculous ulceration, eczema, and similar affections.

As lupus is one of the most troublesome of diseases, any

method which would enable one to treat lupus successfully would be of the highest value. In the treatment of lupus the results had been very encouraging, and zinc, aniline, or copper should be tried. In an obstinate case of tuberculous ulcer on the inside of the mouth success had been obtained, but only after repeated applications, and copper was found more efficacious than zinc.

Rodent ulcer had yielded well to ionic treatment, and numbers of cases had been successfully treated by many different observers. When taken in time rodent ulcer was readily cured by zinc ions, but the extensive ulcers sometimes met with were not suitable for ionic treatment because of the pain associated with the applications over a large area.

Success has also been reported in the treatment of certain intractable rectal ulceration by ions, and also in vaginal and uterine disorders.

In Mooren's (so-called rodent) ulcer of the eye, which was a most intractable complaint, the usual treatment consisted of cauterisation, but in two cases treated by ionic medication one was completely cured after a single application of zinc ions, and the other after two or three. Granular lids and other affections of the conjunctiva also deserved trial with ions.

In the treatment of sinuses it was difficult to ensure the penetration of the ions into every part of the affected area. It was useless to treat a portion only of a suppurating sinus, and for this reason it was by no means easy to cause a sinus to heal by ionisation, unless one were lucky enough to reach every part of its interior. The effect was only temporary where it was not done completely, as re-infection occurred.

Dr. Lewis Jones congratulated Dr. Tayler on the case of neuritis which he had relieved by ions. Trigeminal neuralgia of severe type was sometimes benefitted markedly by ionic medication of the skin of the face, using salicylic or quinine ions. It was possible that certain ions introduced into the skin of the face might travel along the lymphatics of the fifth nerve to the Gasserian ganglion, and thus produce beneficial results when the neuralgia was the result of changes there.

The solutions to be used were, as a rule, to be of a strength of

1 per cent. Metals, alkalies, alkaloids were driven in from the positive pole, acids from the negative. Neutral salts formed the best material for the solutions; thus quinine was best introduced from a solution of its hydrochlorate. Salicylic acid from a solution of sodium salicylate, and so on. In the case of zinc and copper, the positive electrode should be of that metal, and the solutions should be sulphates or chlorides of the metal. Where the corresponding metal could not be used for the electrode, a carbon or platinum electrode should be employed, and care should be taken to have abundance of the solution in numerous layers of lint. For the introduction of ions from the negative pole the same precautions should be taken, but any ordinary metallic electrode might be used.

Discussion.

Dr. J.W. McBAIN said that on the physico-chemical side of ions a great deal of work had been accomplished, and he foresaw a great field of usefulness for it in medical practice. In a large number of cases the salts were diffused through the membranes of the body. In those cases where it would be impossible to get a metal electrode in contact with the surface, it might be possible to explore with a glass tube filled with the solution. In applying metallic or alkaline radicles the positive terminal should be employed, while for all acid radicles it would be necessary to reverse the current.

Dr. W. KENNETH WILLS said he had had no more striking results of ionic treatment than in rodent ulcer, and he had hoped to show a patient under treatment with zinc ions. She was treated about eighteen months ago with one application, but at the time only half the disease was done, and she was prevented from continuing the treatment. Later the patient came up because of the increasing size of the untreated part. The part that had been subjected to ionic medication was well, except for a small nodule in the centre; whilst the other half, freed by the part that had healed, had fulminated, and had grown very considerably. He inquired what had given Dr. Jones the best results in the treatment of lupus erythematosus, as zinc had been found to be of little use. Not much success had been gained in treating ulcers where cartilage and bone were involved. Several interesting cases of sinuses had yielded well to iodine ions. He was not prepared to say that the ion mattered in these cases, although the ion made the sinus sterile for a considerable time.

Mr. J. TAYLOR mentioned the benefit obtained in ozœna by the use of magnesium and copper ions, and mentioned a case where

a child's deafness had been incidentally improved while undergoing ionisation treatment for another complaint. He inquired as to benefit derived from ions in ringworm treatment.

Dr. G. PARKER said he was specially interested in the fact that it was possible to introduce single ions, though their properties were yet to be learnt. In giving cataphoresis he inquired if the electrodes should be placed close together, or at some distance away from each other. He questioned whether a better result would not be obtained by cutting off the circulation as much as possible, such as by using a rubber ring on a gouty finger, or by stopping the circulation by using one of Bier's bandages. He thought that care should be taken that the battery did not polarise; and he presumed the question of reversal of current was not necessary.

Dr. HEY GROVES asked for more information as to the treatment of malignant disease by ionisation, and what advantages, if any, it possessed over the radical excision of the growth.

Dr. ROXBURGH stated a case of a man operated on for fistula in ano, which had obstinately refused to heal under surgical treatment, but zinc ions had been used with great success, and after four applications the wound was only half the length it was at the beginning.

Dr. WATSON WILLIAMS asked as to Dr. Jones's success with diphtheritic ulcers in the latent form, and if there was any disadvantage in using the strongest possible solutions. He had used magnesium ions with a current of 25 or more milliampères for thirty minutes, and had found this useful. With regard to the word "sinus," he asked if Dr. Jones referred to the accessory sinuses of the nose.

Dr. VICKERY said that three years ago he had used ionisation, but possibly on the wrong case. It was one of superficial epithelioma of the hand. The treatment gave great pain to the patient, and after three applications refused to continue the treatment. He referred to the nature of the resulting covering of the ulcer—similar to the white of an egg, or as if it had been daubed with strong carbolic.

Dr. BOWKER gave his experience with chlorine ions, which had had great influence in a case of Dupuytren's contraction, for which he had given chlorine in a 2 per cent. solution in 50 to 80 milliampères for an hour at a time. The patient had to leave at the end of a week, but he was able to extend the finger. He asked if Dr. Jones had any remarks or suggestions to make as to the best form of lithium salts in arthritic affections. A patient suffering from gout had lithium between the joints, and chlorine in the other joints, and by these means warded off for a month all gouty symptoms. He inquired if any hydroxyl ions were useful

in stricture of the urethra, and what strength of current one was justified in using.

Dr. NIXON inquired whether the single prolonged application had any advantage over repeated short ones; also whether the distribution of ions into the wall of a cavity packed with gauze moistened with the ionisable solution took place fairly evenly. He described some results of treatment of papillomata and warts, saying that the naked electrode had advantages over the lint pad upon small areas. He also asked for information as to ionic treatment in fissure and pruritus ani.

The PRESIDENT thanked Dr. Tayler and Dr. Lewis Jones for their kindness in opening the discussion, and congratulated the members on the instructive discussion. He was sorry to hear it hinted that the ion used made no difference. They knew that to a certain extent electricity suffered from the vague way in which it has been handled, and they ought to know exactly with what they were dealing. When salicylic ions entered the body he thought they should be detected in the urine. He inquired as to the length of time and results in the treatment of neuralgia, and what ions had been used.

Dr. LEWIS JONES, in reply to questions, said that for the ionisation treatment of neuralgia, quinine and salicylic acid had been found valuable, and of the two he preferred salicylic acid, as the ions were well tolerated by the skin. Long sittings of from twenty to twenty-five minutes were necessary, and currents of twenty or thirty milliampères.

He thought that fissure of the anus and pruritus ani were suitable subjects for trial by ionic treatment, although personally he had had no experience of their treatment by the method.

As regards excision versus ionisation of rodent ulcer, doubtless much might be said on both sides; but excision left a scar, and there was a risk of re-infection of the wound during the operation, and consequent recurrence.

He thought that the direct application of a bare metal electrode without any layers of moistened lint between it and the skin, as described by one of the speakers, would be more painful.

To treat ringworm by ionisation was a difficult matter, as it was impossible to secure the penetration of the ions to all the hair follicles, and it was useless to leave any still containing the fungus, as recurrence was certain to take place. By using zinc or copper ions he had been able to produce a growth of healthy hair

on patches affected by ringworm, but the ringworm fungus could still be discovered lurking in a few follicles.

In the case of Dupuytren's contraction referred to by a speaker, he considered that if more time had been given the result would have been better.

When he used the word "sinus," he meant a suppurating sinus remaining after an operation wound, and not the anatomical sinuses of the nose.

In lupus erythematosus the ions of zinc and of copper had given good results, although success had not followed in all instances.

ELECTRICITY IN GENERAL PRACTICE.

BY

HERBERT P. TAYLER, M.A., M.B. Cantab.

ELECTRICITY does not receive in general practice the attention that its therapeutic value deserves, owing, no doubt, to the idea that electro-therapeutics require costly and complicated apparatus. This idea may be true if one is to include X-ray photography and high-frequency treatment; but a very great amount can be done for the relief and cure of patients by means of a simple battery of 18 to 20 Leclanché cells, and a small coil driven by a single dry cell to supply the interrupted current.

If, in addition, it is possible to install a Wimshurst static machine, the scope of the work done can be much enlarged. A Wimshurst machine, however, needs a large room to contain it, and almost necessarily an electric motor to drive it; it is also rather a costly instrument, but it lights an X-ray tube perfectly for all screen work, so that it is useful for that, as well as for therapeutic use.

Electricity has been brought before the general public in a marked manner by the discovery of X-rays by Röntgen, and by the advent of the motor-car, so that people talk glibly about

matters of which a few years ago they would have confessed complete ignorance; and either thanks to, or in spite of, the half-penny Press, expect to obtain great results from electrical treatment.

The use of electric ignition on motor-cars has led to all sorts of improvements in the manufacture of small accumulators, and the advantage is inestimable of having always available on the car the means of lighting a lamp for throat or nose work, the heating of a cautery, or even of lighting the area of an operation.

The knowledge acquired from the electrical devices of the motor-car can well be applied to the therapeutic instruments, and the object of this paper is to give a short account of the cases, which cropped up during one year in a general country practice, in which I thought electricity would be a useful therapeutic agent, and to consider where it was useful, and especially where it was not useful. I begin with cases treated with the constant current.

Case 1.—A male, aged about 30 years, who in his occupation as an insurance agent was exposed to all weathers. He came complaining of an acute neuritis of the right brachial plexus, which did not respond to anti-rheumatic remedies, so on June 21st he was treated with the constant current bath. The first bath relieved the pain, and after the twelfth sitting he was discharged cured.

Case 2.—Miss C., aged 44, a very stout lady, with a strong family history of rheumatic troubles, came complaining of pain and the formation of Heberden's nodes at the phalangeal joints of both hands. After two baths the pain was much relieved, and the nodules distinctly softened and lessened.

Case 3.—A lady sent me by the last patient because she had a similar condition of the hands. She had four baths and was improving nicely, when on the occasion of the fourth treatment she told me her feet were affected in the same way, and I suggested a combined foot and hand bath. This apparently did not please my patient, as the next day I received a note saying she did not desire further treatment.

The next two are cases of deafness with tinnitus. The treatment consisted of the application of the constant current by means of an electrode made from a binaural stethoscope,

fitted with a binding screw, applied over the external meatus, as suggested by my friend, Dr. Lewis Jones, the indifferent electrode being put on the nape of the neck.

Case 4.—Miss C., aged 34, suffering for eighteen months from post-influenzal deafness. She can only hear when spoken to loudly, and complains very much of constant noises in the ears, as of escaping steam. She began with a dose of 3 *ma.* for twenty minutes, and the first dose convinced her that the treatment was useful. She did not attend very regularly, but came at intervals during nine months, having in all twenty-two treatments. The noises were kept to a bearable amount, and the hearing was much improved.

Case 5.—Mrs. H., complaining of deafness with tinnitus, which has existed for the last twenty years. No change visible in the drum membrane. The noises are very distressing. She was treated from March to July, altogether forty sittings. The dose was 3 *ma.* for twenty minutes. The noises were not benefited, and the deafness very little improved; a watch, which at first was only heard on contact with the ear, being at last heard at a distance of three inches. She grasped so at the hope of improvement that she constantly returned for treatment, although I tried to dissuade her. Eventually she concluded it was not worth while to continue. This case is interesting because there was a definite slight improvement after even twenty years of untreated disease, and because it shows how patient many deaf people are in carrying out any treatment which offers hope.

The next two are cases treated with the interrupted current.

Case 6.—A girl, aged 19 years, complaining of constant desire to micturate. She can control the bladder for a short time, but constantly has to empty it as the effort to control is so painful. She is a domestic servant, and has been obliged to leave her situation because of this trouble. After a course of iron and belladonna without any improvement, she was treated with the interrupted current. A conical electrode covered with wash leather was passed into the entrance of the vagina, and the other pad electrode was placed on the lumbar region. The strength of current used was such as, on trial, made the interosseous muscles of my own hand contract nicely. I may mention that these muscles make a very convenient test for the strength of either constant or interrupted current. After five sittings she was so much improved that she was able to attend divine service and sit it out without trouble, and she has continued to hold her water well ever since. The sittings were of fifteen to twenty minutes' duration.

Case 7.—A young man, aged 24 years, who complains of occasional nocturnal enuresis. This has existed since childhood, but has been specially troublesome lately. Drug treatment was tried without any effect, so treatment with the interrupted current was begun. One electrode was pressed on the perineum, and he lay with the other pressing on the lumbar region. After one or two sittings he improved, and treatment was not needed after the sixth application. He has had no bad attack since, though there is an occasional accident when out of sorts.

Case 8 is again an interrupted current case, but of rather a different nature. She is a married lady, aged about 40 years. Has had a poor circulation all her life, and suffers badly from chilblains. Even in summer if she washes her hands in cold water the fingers go white, and remain dead for several hours. In October she was suffering from a chilblain. She was fitted out with an inexpensive coil driven by a dry cell, and shown how to connect this up to two small zinc electrodes. These were placed one in each of two basins of hot water, and she plunged a hand in either basin. As a result, the current ran nicely and smartly through each hand and arm. She was directed to withdraw the regulating tube until she had as strong a current as was pleasant, and to keep it running for twenty minutes at a time, and to use it every day. In a week the chilblain was well, and she kept her hands comfortable all through the winter.

This treatment of chilblains was suggested to me many years ago by my friend, Dr. Lewis Jones, who observed that the chilblains on the infantile paralytics who were treated at St. Bartholomew's with interrupted current baths quickly disappeared, and cases which I have treated myself have made me fully appreciate its value. It is necessary to begin before the chilblains break, as the application to a broken chilblain is apt to be painful. Still, even then I can strongly recommend it to anyone who suffers from this tiresome ailment ; if a very weak current be used the pain is quite bearable, and the ulcer soon heals, while the painful itching is quite allayed.

I now come to a series of cases which are to me the most interesting because they were treated with the static breeze generated by a Wimshurst machine.

I think the use of the static machine is unduly neglected in England. While I must confess to ignorance of the advantages of high-frequency current, as I have never worked with the apparatus, I feel sure that many of the cures claimed for high-frequency can be brought about by the static breeze.

Cases 9 and 10 are so exactly alike that one account suffices. They were both elderly men suffering from a very chronic, but not very severe form of sciatica. They could both walk with the aid of a stick, and both needed help to step up on to the insulated stool. They were both treated in the same manner, viz. placed sitting on a stool on the insulated stool connected up to the negative pole of a four-plate Wimshurst machine ; then a metal pointer connected to the positive pole was passed up and down the limb at a distance just short of sparking, so that they got a brisk breeze. After ten minutes of this treatment the pointer was replaced by a ball of about two inches diameter, and a single spark, as long as the machine would give, was taken from any spot stated to be painful. Some four or six of such sparks were taken at each sitting.

It is necessary to be careful in this part of the treatment to make sure that only a single spark passes. One spark feels as if a sharp sudden tap with a hammer had been given to the selected spot. It startles, but does not really hurt. If, however, the operator is careless and allows a stream of sparks at this high tension to pass to or from his patient, it is extremely probable that he will not be called on for further treatment.

These two patients each stated that their pain was much relieved by the first treatment, and after the fourth sitting they had each discarded their walking-sticks, and were walking easily and comfortably.

Case 11 was a man with sciatica, who had been helped but not quite cured by drug treatment. He received two doses of the static breeze, and that completed his cure.

Case 12 was again a case of sciatica. A lady staying with friends in the district heard of the treatment of a friend suffering from sciatica by static breeze, and thought she would like to try the effect. There was only time for two sittings, but she was so satisfied that it did her good that on her return to London she obtained further treatment. Considering how unsatisfactory and tedious the treatment of a chronic sciatica often proves, there is here a useful field for static electricity.

Case 13 was a woman, aged 45, who was broken down by overwork in nursing her sick mother. She had had a good deal of heavy lifting to do, and complained of an obstinate pain in the left sixth intercostal space. She was treated on two occasions with the breeze, but she was obviously afraid of the machine and averse to treatment, so it was stopped after the second sitting. It may safely be said that she received no benefit.

Case 14 (also a visitor) was suffering from a neuritis of his brachial plexus. He too received only two treatments, and each treatment made him distinctly more comfortable. I have little doubt that had time allowed he would have been cured.

Case 15, an elderly gentleman suffering with a chronic arthritis of the right hip, and possibly also some trouble of the same sort in the spinal articulations, came to see if the breeze would relieve the constant pain in the back and leg. He was much pleased with the relief he got, and returned nine times for further treatment, coming twice or three times a week, and only left off attendance because he had to leave England. He certainly got some relief of pain, and walked better for a time after each sitting, but although he asserted that he got permanent good, I was never quite satisfied myself that he did. There was no doubt about the temporary good.

Case 16 is, clinically, an interesting one. A young married woman, aged 30, married three years, came complaining of dysmenorrhœa and dyspareunia. At about twelve years she began to have pains in the back and stomach every month, but there was no sign of menstruation, until at twenty years of age she had such pain that some operation was done, presumably an operation for imperforate hymen. Since then the periods have been so painful that she always has to lie up one or two days. The pain caused by any attempt at coitus is so severe as to make her faint. Examination disclosed a large urethal caruncle, and an abnormally small vagina. Destruction of the caruncle with chromic acid rendered coitus practicable, but the dysmenorrhœa continued. Treatment with drugs and hot baths and douches did little good, so the static breeze was tried, and she was treated in all thirteen times. The pain was relieved so much as to allow her to get up and lie on a couch downstairs during the first two days of the period, instead of lying absolutely in bed, so that she received some benefit, but was not cured.

Case 17.—A young man, a visitor, was brought complaining of a constant pain in his back, the cause of which was not at all clear. Thinking it might be neuralgia, he was treated on three occasions with the static breeze. He received no benefit.

I now have to mention two cases in which treatment by ionisation was used.

Case 18.—The first, which I have already reported in the *Proceedings of the Electro-Therapeutic Society*, was a lady aged about 50, who has had a rodent ulcer since 1902. I cannot go very fully into her case, but may mention that she was treated with X-rays for some time without benefit, then under the influence of radium the ulcer was very nearly, but not quite, healed. Then, when it broke down again, it was treated by placing a pad of lint soaked in a 2 per cent. solution of zinc sulphate over the wound, and pressing a zinc electrode the size of the ulcer down on this. The zinc electrode was connected

to the positive pole of the battery, and a current of 10 to 15 *ma.* was passed for ten minutes, or a few minutes longer if it could be borne. After many applications the ulcer was completely healed by July, 1906. In March, 1907, there was a slight breaking down, which healed again after one treatment with zinc, and we have gone on ever since with an occasional breaking down, which has healed up again after one or two treatments. She now has an ulcer about $\frac{1}{4}$-inch in diameter which shows healing edges.

This case gave me much encouragement to continue treatment of such cases by zinc ions, as when the treatment was begun the ulcer was quite 2 in. by $1\frac{1}{2}$ in. in size, and it was healed up for some months as the result of treatment.

Case 19 was at first sight a similar case. A man, aged about 55, had an ulcer at the inner canthus of the right eye, which had existed for several months. Although rather doubtful of its nature, I tried to persuade myself that it was a rodent ulcer, and commenced zinc ionisation. He bore the pain of the treatment well, and had in all fourteen treatments. The ulcer never showed the white edge that a rodent does, and it showed no sign of healing under the treatment; so it was excised, and was reported by the pathologist to be a squamous epithelioma. He reports: "In some respects it resembles rodent ulcer, in the rosetted appearance of the advancing edge and the small size of the epithelial cells at this part. It shows, however, cell nests and keratoid changes, so that it must be considered to be more malignant than rodent ulcer usually is."

This case is interesting because I was rendered suspicious of its nature, as it did not react to the zinc ions in the same way as the former case.

I may add that within the last fortnight he has consulted me for a recurrence of the growth. I am now treating it with X-rays.

Case 20 was an old man with a large chronic ulcer of the leg. He had one or two sittings with zinc ionisation, in the hope that it might reduce the septicity of the wound. This did not, however, result. He was then X-rayed a few times, as just then that form of treatment had been recommended. He did not respond, and still remains with a large ulcer.

There remain three cases of malignant disease treated by X-rays. Of these two had their pain much relieved and the bulk of the growth reduced, but they eventually died of their cancer. The third, an old lady 82 years old, still goes on with a scirrhus mammæ. If she feels discomfort she comes and has a

few treatments, which always result in a hardening and shrinking of the growth, and relief of any pain.

The last case was one in which malignant growth of the mamma was suspected. The lumps in the breast were treated by X-rays on several (seven) occasions without benefit. The growth was then excised, and found to be the result of chronic mastitis.

I have placed these cases on record because most of them were helped by very simple electrical treatment. When the diversity of the symptoms relieved is considered, I hope I shall have established my contention that electricity is a very useful therapeutic agent to the general practitioner.

Progress of the Medical Sciences.

MEDICINE.

Aphasia.—The following is taken from a very excellent review of the recent work on aphasia by Dr. James Collier.[1]

Marie in 1906 strongly attacked the accepted teaching as to the pathological basis and nature of disturbances of speech, and said that the whole subject was in urgent need of revision. This started a controversial discussion, which is not yet closed, and has been of material service in clearing up obscurities. Prior to Marie's paper it had been proved that the localisation of the chief centre for speech is the L. temporal lobe, and this was generally accepted. It was also held that motor aphasia was caused by a lesion of Broca's convolution in the L. 3rd frontal gyrus (F. 3), the signs being loss or disturbance of spoken language, with some interference with internal speech, associated generally, but to a varying degree, with alexia, agraphia and intellectual defects.

[1] *Brain*, 1908, xxxi, 523.

Sensory aphasia (Wernicke) was held to arise from a lesion of the posterior two-thirds of L. second temporal gyrus (T. 2) (Wernicke's zone), and perhaps also of surrounding gyri, it was characterised by defects of internal speech and intelligence, more or less complete "word-deafness" and "word-blindness," and often by severe defects of outgoing speech, paraphasia and jargon-aphasia. The chief difficulty has been in the accurate differentiation of these two types of motor aphasia and sensory aphasia, for the difference between them is rather one of degree than of kind; they are often difficult to distinguish clinically, and have been repeatedly confused, the same cases being claimed by one author as "motor" and by another as "sensory" aphasia. About the types "pure motor aphasia" and "pure word blindness" there is no dispute, the former depends upon a subcortical lesion isolating the speech-centres upon the outgoing side, and the latter upon a similar lesion isolating the speech-centres on their incoming side from the primary visual centres in either hemisphere. The term "total aphasia" is applied to cases where lesions occur in both Broca's and Wernicke's regions, and is characterised by severe defects of intelligence and of all the elements of speech.

It was on account of the complication of the subject, the hypothetical nature of the foundations on which the various schemes of aphasia were based, the inaccuracy of much of the pathological work, and the absence of a working hypothesis universally and easily applicable for the study of clinical varieties that Marie, in 1906, called for consideration of the whole material.

Marie disputed the view so generally held that the building up of the faculty of speech depends upon the registration of speech memories in the central cortex as "visual word," "auditory word," and "kinæsthetic word" memories. He denied that Broca's convolution F. 3 has any function in connection with speech, and that there is any distinction between "motor" and "sensory" cortical aphasias. He says that there is only one speech-centre, diffusely localised in the L. temporo-parietal lobe, and that this centre is a region of intelligence specialised for language, not a centre of sensory images; "word-blindness" and "word-deafness" are thus defects of the special intelligence for speech. There is but one variety of aphasia from lesion of the cerebral cortex, and this corresponds with the aphasia of Wernicke, resulting from lesion of the region of intelligence specialised for language seated in Wernicke's zone. The classical aphasia of Broca is a combination of aphasia plus anarthria, resulting from a double lesion in Wernicke's zone, and in a quadrilateral area around the lenticular mucleus. This quadrilateral is limited anteriorly and posteriorly by vertical frontal planes passing through the anterior and posterior limiting sulci of the insula, without by the surface of the insula, and within by the lateral

ventricle. It is connected with F. 3 in front, and by a compact band of fibres (temporo-parietal isthmus) with Wernicke's zone. Lesions in front of this isthmus produce anarthria, behind it aphasia. It is to be noted that Marie employs the term anarthria not according to the general use, as a paralytic defect of articulation, but in the sense of Broca's aphasia to mean "loss of, or difficulty with, articulate speech, with complete preservation of internal speech, and with the absence of articulatory troubles of a paralytic nature."

Naturally these views of Marie have aroused much controversy. With regard to his contention that Broca's convolution F. 3 has nothing to do with the speech mechanism, Dr. Collier quotes cases from Déjèrine (and others) in which very careful pathological and microscopical examination showed a lesion of this convolution in connection with the clinical features of Broca's aphasia, and also points out the important bearings which the recent work on apraxia,[1] dependent as it probably is on lesion of the first and second left frontal convolutions, has upon Broca's aphasia. He concludes, after careful weighing of the evidence and arguments on both sides, in favour of the retention of the L. third frontal gyrus as an important speech-centre upon the outgoing side. He points out the difficulties of the unlocalised and functionally unexplained motor mechanism in the "quadrilateral" area, and suggests that the "anarthria" ascribed to lesions of it may arise from section of the projection of F. 3 and of the foot of the anterior part of the corona radiata which are contained in this quadrilateral. It further seems unlikely that the lenticulo-striate body (quadrilateral), which has little or no direct connection with the cortex cerebri, should be a motor mechanism for speech, one of the highest cerebral functions, and Dr. Collier considers "that Marie has not proved his case for the shifting of the motor speech function from Broca's region to the quadrilateral, yet the question is one that needs much further investigation."

Dr. Collier thinks that the most important part of Marie's work is his conception of the speech function of the cerebral cortex. Marie does not believe that the elements of speech are registered as sensory images, and considers that the separation of the visual from the auditory part of speech is erroneous, and that this separate localisation in the cortex has no foundation in fact. The function of speech is diffusely localised in the L. temporo-parietal region, an intellectual centre specialised for speech, not a sensory centre for the storing of sensory images. Destruction

[1] Apraxia is the inability to perform skilled movements with the limbs in absence of paralysis, of loss of sensation or of co-ordination, or of intellectual defect. Motor apraxia thus bears the same relation to movements of the limbs as motor aphasia to movements of the muscles concerned in speech.

of individual portions of this area causes "a general depression of speech intelligence and of general intelligence, which results in the loss of the speech functions in reverse order of their depth of impression" or acquirement. The whole of the phenomena of aphasia are much more easily explained on the ground of varying degrees of crippling of a single speech intelligence centre than upon the old hypotheses."

* * * *

Anaphylaxis.—In an interesting paper Dr. Eugene McCampbell[1] discusses this subject. In a certain percentage of cases in which diphtheria antitoxin is injected toxic symptoms occur, and occasionally death. These untoward results might result either from the action of antitoxin itself, or from the horse serum in which it is contained. Experiment has proved that the antitoxin is not the poisonous body, and that there is no toxin or toxon present. Rabbits, guinea-pigs, and other animals can withstand very large injections of normal horse serum without ill-effect. If, however, a guinea-pig is given, say, .004 cc., and then a larger injection of, say, .1 cc. horse serum the animal dies or is seriously ill after an interval of 8–13 days. Death occurs, as in antitoxin poisoning in man, from paralysis of respiration. The guinea-pig has been rendered hypersensitive to horse serum, so that a second somewhat larger injection produces serious or fatal symptoms. The second injection must be made at the proper interval, 8–13 days; if given before this the reaction does not occur, and on being injected subsequently at the proper interval again no reaction occurs (immunity). To this condition of hypersusceptibility or hypersensitiveness to proteins the name anaphylaxis is given. Small injections usually hypersensitise, large produce immunity. Two well-known examples of anaphylaxis are the "reaction" to tuberculin and mallein by patients the subjects of turberculosis and glanders respectively. Very many if not all proteins (including various species of bacteria, yeasts), except gelatin, will produce the reaction. Further, a guinea-pig may be sensitised to several proteins at the same time. If the blood serum of a sensitised animal be injected into a second animal the latter is rendered "anaphylactic" more speedily than the first. The sensitising substance is in the serum, and it is not necessarily present in large amounts. Neither the toxic nor the sensitising substance have been isolated. Wells has shown that one millionth of a gram of pure egg-white (triple recrystallised) will sensitise a guinea-pig fatally. The very small amounts of egg-white which will sensitise and intoxicate proves that it is the same molecule or two molecules of the same kind. Probably, therefore, in the case of egg-white and of bacterial proteins the same element sensitises and poisons. In the case of horse serum there is no such positive

[1] "Anaphylaxis and Immunity," *Med. Rec.*, 1909, lxxv, 555.

proof ; probably the sensitising substance is euglobulin or a closely allied body.

The anaphylactic reaction is a specific one to the protein to which the animal is sensitised. Instead of injections, guinea-pigs may be sensitised by feeding them either with serum or *uncooked* meat ; thus fed on dried horse meat they were sensitised to horse serum.

Anaphylaxis can be transmitted through the mother to the offspring ; in most cases it is a case of antenatal acquirement and not true heredity. The transmission of anaphylaxis to bacterial proteins from the mother to the young is a possible explanation of inherited tendencies to definite infectious diseases, *e.g.* tuberculosis.

An individual may become immune by means of a process of anaphylaxis. The first injection of a bacterial protein into an animal produces no effect, but the second injection, after an interval of time, produces the same anaphylactic symptoms as horse-serum. If the animal recovers it is usually immune to further injections with this protein. By this phenomenon the period of incubation in some infectious diseases which last from ten to fourteen days is explained. In those having a shorter period, such as pneumonia, the crisis corresponds to the period of sensitisation.

In pregnancy the similarity of the symptoms and the conditions under which eclampsia occurs suggest anaphylaxis as an explanation. The possibility of the mother being sensitised by either the proteins of the placenta or the fœtal blood and subsequently being poisoned thereby has been suggested. Experimental evidence seems so far to show that in guinea-pigs the mother may be sensitised by the autolytic products of her own placenta.

* * * *

Sensitisation of bacteria.—A research by Drs. White and Graham[1] on the interaction of micro-organisms, normal serum and leucocytes, and its effect on infection is of interest. They conclude from their experiments :—

(1) That the infective power of tubercle bacilli for rabbits is greatly increased by sensitisation with normal rabbit serum.

(2) This sensitisation may be accomplished by minute quantities of serum (.1 cc.), and greatly increased by previous incubation of the serum and bacteria at 37° C. in vitro.

(3) The increased infective power may be counteracted by exposure to leucocytes of the same species.

(4) The power of sensitising bacteria, and thereby increasing

[1] "On the increased infective power produced in bacteria by sensitisation with normal serum of the same species," *J. Med. Research*, 1909, xx, 67.

their infective power, is probably possessed alike by homologous and heterologous normal and immune serum.

(5) That probably other bacteria are also capable of sensitisation, and their infective power thereby increased.

J. MICHELL CLARKE.

SURGERY.

IN a report on 2,000 cases of operation for **Radical Cure of Hernia,** Bull and Coley, of New York,[1] have given us the results of the operations performed at the Hospital for the Crippled and Ruptured, from 1890 to 1907, by Drs. Bull, Coley and Walker, and the Assistant Surgeons. They were almost all on children, only 137 were operations on adults. The method of reporting the results in this paper is not wholly satisfactory. We are told that there were so many relapses out of a certain number of cases, but we are not told for how long the cases were followed to see if relapse occurred. Thus we are told that there were only nine failures to obtain a cure in 1,185 cases of Bassini's operation, but not whether an attempt was made to find out the late result in all these cases, and, if so, in how many cases the patient was traced, and at what period after operation he was found free from recurrence. But we are told that 837 cases of operation for inguinal hernia were traced for periods of from one to fourteen years, and the results are given. Therefore, evidently the whole of the 1,185 cases were not traced even for one year, and we may presume that the nine relapses in the 1,185 cases were simply relapses that happened to come under observation. This, of course, cannot represent the true proportion.

However, there is much useful information to be obtained from this paper, though the statistics are not all that we should desire. The authors consider that it makes very little difference in the result whether, in doing Bassini's operation, the cord is placed in a superficial relation to the internal oblique after it has been sutured to Poupart's ligament, or is left in its natural position. They operated without transplantation of the cord in 346 cases. The results of Bassini's operation in their hands has evidently been an encouraging one; but in children some surgeons consider that it is not necessary to do as much as this, and that simply a high ligature of the sac is all that is necessary. Mr. Harold Stiles[2] has reported 360 cases of operation for hernia in infants and young children, with only ligature of the neck of the sac at the external ring, and the use of a suture drawing the pillars of the ring and the conjoint tendon together; and he only knows of four relapses, and two of these were after radical

[1] *J. Am. M. Ass.*, 1907, xlix, 1017. [2] *Brit. M. J.*, 1904, ii, 812.

cure, and one after operation for strangulation. Stiles does not give us any series of statistics as to recurrence—he says many of his cases had been too recently operated on to do so—but neither do Bull and Coley give a consecutive series of traced cases to support their statistics.

As to the mortality of the operation in children, Bull and Coley's cases are most encouraging, for they only had one quarter of 1 per cent. mortality in 1,978 cases, and, as already stated, almost all these were operations on children. Stiles's mortality was also very small, five deaths in the 360 cases, and one of these was due to chloroform, another followed operation for strangulation; 26 per cent. were on infants under one year old. Drs. Bull and Coley used kangaroo tendon, chromicised to last three to four weeks, in almost all their cases. They operated on all their cases of femoral hernia with a purse string suture of kangaroo tendon applied to the crural canal, and it is stated that one of the authors has operated on 125 cases without a relapse, but no statistics are given as to the number of cases traced for any given period. They do not advise operation under four years, as they consider that the risk is greater than in children older than four, and they believe that a considerable number of children under four are cured by a truss, and that strangulation under that age is very rare. Stiles's statistics show that the risk is very small in operations in infancy, and that when strangulation does occur in childhood (which is rare) it nearly always occurs in infancy. He disagrees with Bull and Coley that in a considerable number of children the rupture can be cured by a truss. But statistics showing the result of truss treatment at different ages in infancy and childhood, for given periods, are much wanted. That it often fails there can, of course, be no doubt; but we want reliable data as to how often it succeeds. Even after the rupture seems cured the case must be watched for a considerable time before being reported, as a rupture may suddenly return a long time after the sac has been supposed to be obliterated by the pressure of a truss, when there is some extra strain or a severe cough.

The Pathology and Treatment of Inguinal Hernia in Children has been discussed by Mr. C. H. Fagge[1] in a recent paper based on his experience of seventy-eight cases at the Evelina Hospital. He accepts the view of Hamilton Russell, of Melbourne,[2] that the sac is always congenital and not acquired, with regard to these hernias in children, and that the hernia occurs into a non-obliterated funicular process. In only eight of his seventy-eight cases was the hernia what is generally called a congenital one, *i.e.* a hernia into the tunica vaginalis around the testis. He thinks it much more likely that bowel would descend into such an unobliterated funicular process, than that it would push out

[1] *Lancet*, 1908, ii, 1270. [2] *Lancet*, 1899, i, 1353; 1902, i, 1519.

a new hernial peritoneal sac, through a weak place in the abdominal wall in a young child, apparently because he does not think such a weak spot likely to exist. He does not believe that hernia, even in a baby, is ever translucent, for he considers such cases are really unrecognised hydroceles.

The most important matter with regard to hernia in children, which he considers at length, is the question of operation. He is much in favour of operating even in babies, in all cases. But he does not make it quite clear whether he has any hope of curing them with a truss, for he says: "I think it is now the duty of every medical man to impress upon parents that trusses hold out no prospect of permanent cure, as the time has certainly arrived when cure can be more easily and almost certainly obtained by operative means, which in themselves are practically devoid of risk." If the cure can be "more easily and certainly obtained" by operation, this implies a chance of cure by trusses, and therefore the surgeon could not say to any parent they "hold out no prospect of permanent cure." But he elsewhere in the paper says that he cannot believe trusses ever cure ruptures, though they may prevent their descent; and he states that "of all the patients whom, as an out-patient surgeon, I treated here,[1] I can only remember one in whom the treatment had been so consistently carried out that, after an interval of two years or more, the rupture no longer came down when the patient stood up without the truss." We should, of course, prefer some statistics on the matter, rather than the statement in this form, as many hospital cases are never followed for two years after truss treatment is undertaken. If the hernia no longer came down, it seems quite likely the parents would leave off the truss, and would no longer take the child to the hospital. He seems to consider that the pressure of a truss will never obliterate the sac, so that the rupture may at any time descend into it. But, as before pointed out, he is not quite consistent, for he says: "A truss must be worn day and night for several years before we can hope that the hernia will not return if the truss is omitted, and during this time great care must be taken that a new truss is obtained as soon as the child outgrows the old one. It is a matter of common experience in all hospital out-patient departments that the patients soon tire of the trouble and expense, and allow the hernia to go its own way." This certainly seems to imply a belief that if truss treatment is efficiently carried out for a long enough period it may cure the hernia, for if the rupture never returns that is a practical cure.

Mr. Fagge is in favour of operating after the first few months of life on all cases, but recommends that where it is necessary to wean the baby (this he does not consider necessary in the case

[1] At the Evelina Children's Hospital.

of private patients) it should be done some weeks before the operation, so that the baby may be well accustomed to artificial nourishment by that time. He operates by tying the sac as high as possible, after division of the external oblique, but he has given up as unnecessary the suture of the internal oblique or conjoint tendon to Poupart's ligament. He examined a large number of cases six months to two years after operation, and found no recurrence, but no consecutive statistics of the cases operated on are given. His method of treatment after the operation is interesting. He says "they were placed on a mattress so divided that its middle third was replaced by a bed-pan covered by a rubber air-cushion, which in small babies prevents soiling of the back, and the possibility of excoriation of the skin. The penis was secured into the neck of a test-tube leading to a bottle, so that the urine is carried well away from the region of the wound."

Mr. Clogg[1] is another strong advocate of operation for hernia in children, and reports 126 cases with no mortality. He operates after the fourth month, as soon as the baby can be weaned in hospital practice, but without weaning the infant in private practice. The operation which he performs is practically Bassini's, but, like Bull and Coley, he does not always transplant the cord. He says an attempt had been made to ascertain the after-results of all cases, and he found it possible to do this in 75 per cent. The result, he tells us, was perfect in every case; but he does not give the period which had elapsed since the operation in these cases. All he says is, "The most recent case being operated on three months ago." But we want to know the period since operation in all the cases in considering the question of non-recurrence.

* * * * *

Reduction en masse of Hernia.—Mr. Edred Corner and Mr. Howitt[2] find, from an investigation of the record of the cases at St. Thomas's and St. Bartholomew's Hospitals, how rare the occurrence of reduction *en masse* of a strangulated hernia is—only once in every 331 cases. They found no record of reduction *en masse* of an umbilical or ventral hernia. In 4 per cent. the reduction was, curiously enough, spontaneous; in most of the cases from taxis used by the doctor; but in a fair proportion of cases by the patient himself (28 per cent.). The hernia was almost invariably of small intestine. The records of four cases which occurred at St. Thomas's Hospital since 1900 are given, and one is a remarkable case, inasmuch as the reduction of a hernia (a partial enterocele) at operation was incomplete; for at a second operation, required a few days later by persistence of symptoms, the gut was found "partially" strangulated by the

[1] *Practitioner*, 1907, lxxix, 364. [2] *Ann. Surg.*, 1908, xlvii, 573.

neck of the sac. It had been recognised that the neck had been torn at the first operation, but not that the bowel was still constricted by it.

The authors consider that reduction *en masse* also occurs in non-strangulated cases, but their description of the condition does not seem very convincing; some of the examples would seem to be rather the reduction of portions of bowel or bladder uncovered by peritoneum. In one case a piece of omentum seemed to have inverted an adherent portion of the sac, but this is perhaps hardly a reduction *en masse*.

C. A. MORTON.

DERMATOLOGY.

Sporotrichosis as a clinical entity has only lately come to be recognised as comprising a large group of lesions dependent upon a definite infection comparable to granulomata, such as syphilis, tuberculosis, and actinomycosis.

In England little has been heard of the disease, perhaps owing to its extreme rarity; but in France de Beurmann and others have devoted much time and pains to the separation of this condition from those with which until 1902 it had always been confused and grouped.

The polymorphism of sporotrichosis is equal to that of either syphilis or tuberculosis. As de Beurmann writes: "Sporotrichosis starts in the great majority of cases without affecting the general health, without fever, gastro-intestinal troubles, or wasting; the disease confines itself to cutaneous or subcutaneous localisations. . . . The lesions in or beneath the skin evolve slowly and coldly. . . . Still, all the observations do not agree with this usual type of a chronic and torpid affection. There are sporotrichoses with a sudden onset marked by general disturbance and fever; as in acute infections the appearance of the lesions is rapid and simultaneous, constituting a true eruption. Others, after an onset more or less sudden, continue under the form of febrile attacks, with profound interference with the general health, gastro-intestinal troubles, wasting, etc., each recrudescence of the disease being accompanied by a fresh gummatous eruption. Others run a subacute course, with wasting and severe anæmia. In all these cases the mycosis behaves like an acute or subacute general infection; it resembles the coccal septicæmias with cutaneous metastases." Such, briefly, is the epitome of de Beurmann.[1]

The first cases recognised were published in America by Schenck,[2] and by Hektoen and Perkins,[3] under the title of

[1] De Beurmann and Gougerot, *Ann. de Dermat. et Syph.*, 1909, x, 83.

[2] Schenck, *Bull. Johns Hopkins Hosp.*, 1898, ix, 286 (with plates).

[3] Hektoen and Perkins, *J. Exper. M.*, 1900, v. 77 (with plates).

"Refractory subcutaneous abscesses caused by sporothrix Schenckii. A new pathogenic fungus," a description given by Schenck which has been wholly confirmed by subsequent observations. This previously unknown disease, which had long been confounded with tuberculous lesions and with those of heredo-syphilis, aroused great interest.

The first three cases described were due to obvious local inoculation: a scratch of the skin of the finger by a nail (Schenck), a blow upon the finger by a hammer (Perkins), and puncture of the finger by a piece of wire (Brayton). From this inoculation indolent abscesses resulted, both locally and in the course of the lymphatics, which proved characteristically refractory to surgical treatment, and were ultimately shown to contain a fungus now identified by the name of *sporotrichum Beurmanni*.

Adamson[1] has recently summed up our knowledge of this specific infection, and from his paper the following description is worth quoting: "The cases fall into two main clinical types—the American cases with a primary local infection and a line of chronic abscesses in the arm, connected by a train of chronic lymphangitis. In the second group, the French cases, there were multiple and widely distributed abscesses generally hypodermic, but sometimes associated with these dermic and epidermic lesions."

De Beurmann describes a syphiloid type and a tuberculoid type according as the lesions simulate syphilitic gummata or tuberculosis verrucosa. The lymphatic glands are generally uninvolved.

It has not been clearly demonstrated that the viscera are ever infected, though this seemed probable in one case.

In one case which showed *sporotrichum* in the sputum the lungs were sound. In other cases cutaneous sporotrichosis has occurred in association with pulmonary tuberculosis.

Recently cases have been recorded in which gummata were present, acute or chronic osteitis, periostitis osteomyelitis arthritis and synovitis.[2] Lesions of the mucous membrane have been reported, and also the presence of *sporotrichum* in the buccopharynx and larynx without causing lesions.

In the diagnosis the main points to observe are multiplicity of lesions, indolence, slow involution, firm consistence, viscid grey yellow homogeneous pus, swollen margins with central fistulous opening into the cavity, generally absence of enlarged glands, good general health. The crateriform character of the lesions is especially characteristic. In those cases where the base of the exposed cavity is crusted or vegetating, simulating cutaneous tuberculosis, sporotrichosis is suspected from the

[1] Adamson, *Brit. J. Dermat.*, 1908, xx, 296 (with Bibliography).

[2] De Beurmann, Gougerot and Vaucher, *Rev. de Chirurg.*, 1909, xxix, 4, p. 661 (with plates).

central softening of the lesions, and from the occurrence of more typical gummata elsewhere. Sporotrichosis must be considered, too, in the presence of gummatous periosteal swelling and chronic intra-muscular abscesses.

The diagnosis is readily made by cultural methods, remembering the importance of using suitable media (Sabouraud's peptone-glucose-agar), of not capping the tubes, and of incubating at ordinary room temperature.

In culture, colonies appear on the fourth to sixth day as small white acuminate points 1 mm. in diameter, surrounded by a white areola, finely rayed. They slowly increase in size, and become convoluted and brown in colour. Films from cultures show long filaments 2 μ broad, together with numerous ovoid spores 5 to 6 μ in length by 3 to 4 μ broad. Here and there single spores or bunches of three to thirty are seen attached to the mycelial filament by a short pedicle.[1] De Beurmann has shown that an early orchitis in the rat, after inoculation with suspected products, is diagnostic of sporotrichial infection.

In addition to this description of Adamson, other means of diagnosis may be mentioned. (1) Sporo-agglutination by the serum of patients affected with sporotrichosis,[2] (2) presence of the parasites in the blood,[3] (3) fixation of complement,[4] (4) determination of the opsonic index to the sporotrichum.[5]

As to the habitat of the parasite, de Beurmann and Gougerot have found in two different parts of the French Alps three specimens of the *sporotrichum Beurmanni* as a vegetable parasite.

The histology of the lesions is that of tubercle or syphilis. The lesions present three types of reaction in combination :—

(1) Lympho-connective tissue or syphiloid reaction.
(2) An epithelioid (with giant cells) on tuberculoid reaction.
(3) A polynuclear or ecthymatiform reaction.

The histology of this disease tends to destroy the contention that there is any specific histology of either syphilis or tubercle, for all the changes seen in these diseases are seen here. As de Beurmann and Gougerot say, "There is no such thing as anatomical specificity; there is only specificity of the causal parasite. The *sporotrichum Beurmanni* and the bacillus of Koch produce an identical nodule."[6]

Of treatment Adamson says: "It is characteristic of the lesions that they are remarkably obstinate to the ordinary surgical methods of treatment. Under the administration of iodides they rapidly disappear."

[1] See also *Brit. M. J.*, 1908, ii. Epit., p. 79.
[2] Widal and Abrami, *Bull. de la Soc. Med. des Hôp. de Paris*, 1908, 947.
[3] Widal and Weill, *Gaz. d. Hôp.*, 1908, lxxxi, 847.
[4] Widal and Joltrain, *Ibid.*, 1649. [5] Caussade, *Ibid.*, 920.
[6] De Beurmann and Gougerot, abstract in *Brit. J. Dermat.*, 1908, xx, 202.

The cerebro-spinal fluid in some dermatoses of infancy.—In a recent article Ravaut called attention to the frequent occurrence of a marked lymphocytosis in the cerebro-spinal fluid of children suffering from heredo-syphilis, who appear to present no nervous symptoms, but show extensive cutaneous lesions. When the mucous and cutaneous lesions are unimportant, the reaction is as a rule slight; and the reaction is constantly absent among the offspring of syphilitic parents, where there are no cutaneous manifestations. Tobler[1] regarded this lymphocytosis in the cerebro-spinal fluid as being of great value in establishing the fact of heredo-syphilis in apparently healthy subjects.

Ferraud[2] has done valuable work in submitting these views to a critical examination. His researches deal with the cytology of the cerebro-spinal fluid of infants apparently healthy, who showed none of the stigmata or antecedents of heredo-syphilis. He carefully excluded all subjects who presented signs of fever, or symptoms of pulmonary, aural or meningeal disorders capable of setting up any reaction in the spinal fluid.

At the outset Ferraud anticipated that meningeal lymphocytosis would prove to be absent in non-syphilitic dermatoses, and he hoped thus to establish a means of differentiating simple eruptions from those of specific origin when all other signs of syphilis were absent. This expectation failed to be fulfilled, for it was discovered that lymphocytosis was met with far too frequently in certain infantile eruptions to possess any absolute diagnostic importance.

The conclusions reached in the course of 120 observations were as follows:—

The appearance of a cellular reaction, even to a marked degree, in the cerebro-spinal fluid may be a common occurrence.

During the course of certain skin affections in children, especially in the infantile eruptions in prurigo or in scabies, a lymphocytosis of the cerebro-spinal fluid is frequently found. This reaction is inconstant, and only attains to any importance, as a rule, in extensive erythemas (erythema lenticulare) and prurigos. It is quite comparable to the reaction met with in the cutaneous manifestations of syphilis, acquired or hereditary.

In the absence of a previous history or obvious stigmata of syphilis, the existence of meningeal lymphocytosis appears to have only a relative value in the diagnosis of heredo-syphilis. Even in cases where syphilitic antecedents have been observed it is very necessary, if this reaction is to maintain a serious value, that it should be *interpreted*.

Ferraud gives certain hints which may assist in the correct interpretation of cyto-diagnosis of the cerebro-spinal fluid:—

[1] *München. med. Wchnschr.*, 1906, liii, 1890: abstract in *Bristol M.-Chir. J.*, 1906, xxiv, 348.

[2] Ferraud, *Gaz. d. Hóp.*, 1908, lxxxi, 1539.

1. The lymphocytoses of non-syphilitic eruptions are often very slight, varying from time to time, and are probably less persistent.

2. The cyto-diagnosis not infrequently reveals, in addition to the predominating lymphocytosis, the presence of large mononuclear cells and of endothelial cells in greater abundance than occurs in heredo-syphilis. It is important, moreover, to bear in mind that just as certain previous or co-existent diseases may affect the number of leucocytes in the cerebro-spinal fluid—especially intestinal or pulmonary toxæmias, infections of the middle ear, herpetic eruptions, etc.—so too in young children, particularly nurslings, one must take into account the state of the skin. Once more it is demonstrated that a cellular reaction even of considerable degree may occur quite commonly in the cerebro-spinal fluid; further study may perhaps show certain distinguishing features between these various reactions. But at present we lack sufficient information to entitle us to give to this lymphocytosis a specific value, or to make it a symptom of either tuberculosis or syphilis.

J. A. NIXON.

Reviews of Books.

Has Surgical Treatment Lessened the Mortality from Appendicitis? By FRANK P. VALE, M.D. Pp. 165. Providence: Snow & Farnham Co. 1908.

If anyone is hunting for a good example of the way in which a writer can make a misleading use of statistics, they will find an excellent one in this book. All statistics are not necessarily misleading, but they have to be most carefully prepared to show a true correspondence. We never read more misleading ones than those contained in this book. We think the prize of 200 dollars was very badly spent in encouraging such work. Has surgical treatment lessened the mortality from appendicitis? What reasonable medical man can doubt it? Who, with any knowledge of the results obtained by surgery, could hesitate for one moment as to the answer? Suppose there were two private hospitals in the city in which Dr. Vale practices for the treatment of appendicitis, and in one no case was ever operated on, whatever the condition of the patient, and in the other operation was performed when considered necessary, which would Dr. Vale himself go to? Need we inquire? With his book of useless statistics under his arm, he would clamour for

admission to the hospital where he knew, if he had a suppurative or gangrenous appendicitis, he could be operated on.

What is the value of statistics of the mortality of appendicitis which probably do not include cases of general peritonitis starting in perforation, or some other disease of the appendix? It would take too long to criticise in detail the vast collection of statistics. Would that he had been better employed than in making them.

However, when his mind is not occupied by those useless statistics he says some very true things. For instance, on page 7 he says, "Every surgeon should be first and foremost a physician." How true is this. Whenever a surgeon undertakes the treatment of a disease, he ought to understand that disease, its physical signs and its differential diagnosis, just as much as the physician who may have had the case under his care up to that time. If he does not, he is not in a position to take the responsibility of advising surgical treatment in that particular case, and he becomes the mere human tool of the physician. Physicians sometimes consider that a surgeon need know nothing about the diagnosis of such conditions as empyema, or a dilated stomach, but that he should receive the diagnosis of the physician in all meekness and humility. But the surgeon will often find that where there is a doubt as to diagnosis, the physician is very ready to associate the surgeon with him in the uncertainty when explaining matters to the patient. The truth is, surgeons are becoming more and more operating physicians. Dr. Vale tells us of the "operating neurologist" as the latest subspeciality, and an excellent one it would be. The general surgeon, alas! finds it impossible to be a good neurologist and general surgeon combined, and in this department of work he has no doubt to become now and then the mere human tool of the physician, though a highly-skilled one; but even in this line of work he ought to know a good deal about the pathology and symptoms of brain and spinal cord tumours and brain abscess.

Dr. Vale says that "there must be found some point of vantage from which medicine can be viewed as a whole. If specialism develops without such means for its assimilation, one hundred years from now a corps of specialists will hover over each patient." Perhaps this will be so—if we reduce the 100 to 10—and, if so, who will inform the patient of the nature of his case, and the treatment advisable? Will the surgeon say that operation is indicated if the physician is right in his diagnosis, and the ophthalmologist is right in his diagnosis of optic neuritis, and the aurist of suppuration in the middle ear? And yet when a case is taken in hand by multiple specialists, who is to take the responsibility?

There is one very interesting fact brought out by Dr. Vale's investigations which ought to discourage anyone writing another

book or even journal paper on appendicitis. "Since 1896," he says, "there are indexed in the catalogue of the Surgeon-General's Library at Washington 295 monographs (including graduation theses), and 3,616 journal articles on appendicitis." There seems no fallacy here, but perhaps every thesis written by the innumerable university graduates of America is included in this collection.

The Rectum: its diseases and developmental defects. By Sir CHARLES B. BALL, M.Ch. Pp. xiv, 332. London: Oxford Medical Publications. 1908.

We are greatly pleased with this book and the excellence of the illustrations. They are as good as those in Kelley's works on gynæcology and diseases of the vermiform appendix. Photographs were taken with a stereoscopic camera, and drawings made from them, so as to avoid the flat appearance of an ordinary photograph. The result is excellent. We think the value of such a work has been greatly increased by these illustrations, as no amount of description will sometimes convey to the mind what a glance at a good picture will do.

Sir Charles Ball tells us that we shall not find an exhaustive reference to the works of other surgeons, and this certainly is so, though the French surgeons seem to be referred to fairly often. No doubt such reference is desirable, but on the other hand a book must be brought within reasonable limits, and Sir Charles Ball's experience is well worth reading apart from that of others. The work is not really a very lengthy one, though the large size of the volume might suggest that it was. We have the luxury of very large type.

It opens with a full description of the anatomy of the rectum, the value of which is much increased by the excellence of the illustrations already referred to. Ball describes a new method of naming the lower bowel—introduced by Jonnesco—so that the rectum is said to begin at the third sacral vertebræ, and the bowel above is called the pelvic colon. But he does not adopt the nomenclature in his later description of the rectum, and this is a little confusing.

We are very glad to see that Sir Charles Ball is opposed to the practice—advocated by some surgeons—of making a deep dissection from the perineum to find the rectum in cases of imperforate anus, when there is no indication that the rectum is near the perineum. We have for many years felt that the best thing to do was not to follow this advice, but rather to do what Sir Charles Ball recommends—an iliac colotomy. What value can a long contracting track—practically a sinus—running from the perineum some inches up to the opened rectum be? If we have to dissect deeply to find the blind end of the rectum, there is little chance of

bringing it down and uniting it to the skin, without such tension that it would almost certainly break away again; and if it did unite, what sphincteric control could there be? The external sphincter could not possibly be made to surround the opened bowel.

When we remember what good use has already been made of the sigmoidoscope in diagnosing growths high up in the rectum and sigmoid, we think Sir Charles Ball hardly gives due importance to such methods of examination, and we are rather disappointed he has not used the method more, and devoted a chapter to its use. Touch is, no doubt, as he says, a most valuable method of examination, but even a bimanual examination under an anæsthetic may fail to reveal a high growth which a proctoscope or sigmoidoscope may disclose without the need for an anæsthetic at all.

The author's further experience has convinced him of the importance of recognising the torn down anal valve—the "sentinel pile"—as a cause of fissure of the anus, and that the condition is best treated by simply removing the "pile," and that division of the fibres of the sphincter is unnecessary. We must say that in many fissures we have had to treat, although we have looked for the "sentinel pile"—since we read Sir Charles Ball's paper on the subject some years ago—we have not found it.

In describing the treatment of piles, the author gives information only about his own method of operating, and a brief reference to Whitehead's method. His own method is doubtless an excellent one—it is a form of ligature—but the method of Mitchell, so frequently used now, might, we think, have received some recognition. He does not favour Whitehead's operation, because of the almost inevitable retraction of the sutured mucous membrane. With regard to the impossibility of preventing this in many cases, we quite agree with him, for we have tried a special method of deep suture without success. He writes in a very encouraging way about the results of his little operation for pruritus ani. Even though sensibility return to the area of skin dissected up, the pruritus does not return.

Sir Charles Ball does not give us details and statistics of his cases of cancer of the rectum, as Mr. Harrison Cripps did in his recent work on the subject and in his book on rectal diseases; but by means of his excellent plates and a clear description he gives us useful practical details of operative treatment, and a summary of his experience of its indication and result. He truly says it is no use preserving the external sphincter in the perineal operation if we then cut its nerve supply by dividing the levator ani at its connection with the rectum—as is done in Quenu's operation—and thus dividing the inferior hæmorrhoidal nerve on each side. He has devised an operation for preserving these nerves and the sphincter, which he fully describes; but the question it seems to

us is whether, if the growth was situated high enough above the anus for the operation, the anal segment and external sphincter need be disturbed at all—whether a coccygeal or sacral operation might not be done instead.

We have already expressed our thorough agreement with Sir Charles Ball in his treatment of imperforate anus. There is another matter with regard to which we are delighted to see his opinion, and that is with regard to colotomy in cancer of the rectum too advanced for excision. Why, as he says, should colotomy be done by some surgeons as a routine thing in such cases? The patient may never get obstruction at all. If the lumen is very small and there are already signs of oncoming obstruction, that is another matter. But to do colotomy to secure "physiological rest" is, as Sir Charles Ball points out, to operate with very little reason.

The book is a most valuable one; but essentially a practical guide and not an exhaustive treatise, but no doubt for that reason all the more welcome to many who find life all too short for the many demands of study and work.

Hypnotism. By Dr. AUGUST FOREL. Translated from the Fifth German Edition by H. W. ARMIT. Pp. xii, 370. London: Rebman Limited. 1906.

This, the fifth edition of Dr. Forel's well-known work on Hypnotism, contains certain interesting and important additions to the theoretical phase of this subject. Considerable attention is given to the exposition of his theory of Monistic Identity; that is, the unity of each physiological phenomenon, and its corresponding cortical molecular activity. Mind and body are thus but two aspects of the same thing. That his hypothesis does not harmonise with the Law of Fechner-Weber he ascribes to the interposition of complicated brain centres and their hypo-conceived activity, in its nature facilitating, disturbing, or inhibitory. The author deals subsequently very lucidly with the different planes of consciousness, alternate and serial double consciousness, and states of automatism. He shows how, in dissociated states of brain, hypoconscious associated connections acting vividly may be found, and enchain with them the ego, or may even divide it into a double ego, or duplex personality. Semon's theory of the Mneme or Organic Memory is freely quoted and reviewed. It is considered possible that slow inheritance of acquired characteristics may result from the long continued ecphorisation of engrams, which radiate into the entire organism, and are capable of affecting embryonic cells. Semon's views are again discussed in connection with so-called "Negative" Hallucinations. What he terms Alternative

Euphoria, both simultaneous and successive, affords explanation of these, as also of the possibility of displacing actual sense-stimulation by suggestive ecphorisation. Dealing with the subject of Suggestion, the author emphasises that normally all are intuitively credulous or suggestible. Belief and intuition are complexes largely occurring below the level of super-consciousness: thus Suggestion can take place hypoconsciously, and, in fact, the more the exercise of the superconscious will, the less the suggestibility. The endeavour to assume passivity, as well as mental agitation and resistive attitude, render hypnosis difficult or impracticable. The importance of contrasting impressions (which normally are especially active where the attempt is made to arouse subjective states) is dwelt upon in connection with auto-suggestion, as explaining faulty results in hypnotisation; also complementary and opposite states in so-called negative and positive hallucinations in relation to somnambulistic and insane conditions.

The mechanism of natural sleep and the hypnotic state are the same: both are states of dissociation of consciousness, are states of heightened suggestibility. In sleep, however, the element of exhaustion is added. The criteria of hypnotic consciousness are those of the dream existence, hallucinations of perceptions, exaggeration of feelings and their motor reflexes, dissociation of organic local associations of engram complexes. Forel regards hysteria as a dissociative weakness of the brain, by which a pathological auto-suggestibility is caused: an instability in which conceptions, impulses of will and emotions, are with facility disintegrated. The reaction to Suggestion is morbid, unintentional auto-suggestions are added, there is wholesale production of unprompted paralyses, convulsions, pains, &c. This pathological auto-suggestibility is more deeply morbid in kind than the phenomenon of hetero-suggestibility. Hysteria as a constitutional malady is incurable. The symptoms are ameliorable, not the disposition. That form produced by exhaustion (neurasthenia), or peripheral irritation, is, however, curable.

Some causes of failure in producing hypnosis have been alluded to, principally antagonistic auto-suggestion. The insane are largely unhypnotisable, by reason of the permanent morbid irritation of their brains; or, again, diseased inhibitions or conditions of stimulation underlying delusions, too intense to be dissociated. It is much easier to influence a definite local phenomenon, such as alcoholic craving, than general dispositions. Acquired habits, too, may be removed, but constitutional characteristics are doubtfully to be influenced, and certainly not permanently. Forel here emphasises the need of complete and permanent abstinence from the enslaving drug or habit after cure has been effected; also that the methods of treatment for

all neuropathic cases should be carefully adjusted to each, and intelligent occupations—not mere mechanical routine—should be found.

The influence exerted in hypnosis may extend itself post-hypnotically into the normal condition of mind, and may include that of the operator ; but the reaction to post-hypnotic suggestion will probably depend upon the relative suggestibility of the individual, his normal standard of morality and control, his hypnotic training, and the depth of hypnosis. The higher degrees of somnambulism and certain hysterical persons are deeply and entirely affected by suggestion, and Forel is convinced that any conceivable crime may be committed in the person of one hypnotised, provided that a high degree of hypnosis be obtained. There is safety, however, in the guardedness of the patient, in the sudden and unexpected returns to consciousness to which he is liable, and to the possibility of future revelation under subsequent hypnosis by others. Forel is resolute in the denial of any serious or lasting damage, mental or bodily, which can be occasioned by hypnotism when properly applied. The translator's work is admirably done, and the book is to be unreservedly commended.

Mental Deficiency (amentia). By A. F. TREDGOLD. Pp. xviii, 391. London : Baillière, Tindall & Cox. 1908.

Dr. Tredgold has contributed an excellent addition to the literature dealing with Mental Deficiency. His book in great part will repay perusal by the medical profession in general. He is well qualified to write upon this subject, and has accumulated abundant and valuable material based upon personal research. Throughout the book reads concisely and clearly. Where necessary the investigations of other workers are quoted and suitably acknowledged, but in the main the production is marked by originality of thought and independent labour. We proceed to furnish some quotations from the book. In dealing with the causation of amentia, Dr. Tredgold adopts a classification of " Intrinsic and Extrinsic." By the former is implied influences modifying the germinal plasm prior to conception ; by the latter (or environmental influences) those affecting development whilst within or without the uterus. It will be seen that his intrinsic group has a more limited definition than has the ordinary congenital class of cases. Instances of true primary amentia form 90 per cent. of the total. The author does not endorse the theory of Weismann. He finds it impossible to avoid the conclusion that a serious deterioration of germ-plasm may be brought about by disturbance of metabolism, notably to be occasioned

by alcoholism and phthisis in the parents. His views expressed on the course of degeneration are clear, decisive and based on a personal investigation and compilation both careful and ingenious. He regards the accumulation and intermarriage of derelicts residual in country districts as the chief cause of the rural disproportion of aments; whilst in the great centres of population the effects of unhealthy environment, drink, phthisis, &c., tend rather to insanity in the first instance, although amentia results later as a development of this.

The class of secondary (or extrinsic) aments is a small one, some 10 per cent. of the whole. In these defect is brought about by general or localised disease of nerve cells or by external factors influencing their nutrition. In this group are included lesions vascular, inflammatory and toxic in nature. The essential basis of amentia is an imperfect or arrested development of the central neurons, as well as a numerical deficiency. Embryonic cells are found in undue number in the second and third pyramidal layers of all regions of the cortex, but mainly in the prefrontal and parietal lobes. But added and grosser pathological lesions may complicate primary amentia, or form the sole cause of secondary defect. In proportion to the extent of these and their progressive tendency, be it here remarked, is the prospect of improvability. A considerable proportion of cases of secondary amentia is less capable of this than those of primary kind, owing to the advancing nature of the cerebral lesions. The author remarks that too much stress should not be laid upon physical stigmata as indicative of mental degeneration; it is needful to differentiate those due to inherent defects of germ-plasm from those produced by secondary influences. The inherent "blight" of the primary form gives rise to numerous and widespread anomalies of anatomical development absent in the secondary form. The secondary ament is often well-grown and developed, or with occasional abnormality due to some particular lesion present. Dr. Tredgold combats the view that where paralysis results from this mental deficiency is a necessary co-relate. He has seen many cases in which extensive limb paralysis existed with unimpaired intelligence. The prognosis is less favourable where epilepsy is a complication. An interesting hypothesis is advanced to account for instances of supposed compensation after a cerebral deprivation; that is, there is normally an undeveloped or potential reserve of embryonic neuroblasts which under certain conditions may take on active evolution, and replace nerve cells destroyed by a lesion on the same, perhaps even on the opposite side of the brain. In regard to syphilis, Dr. Tredgold finds that cases of amentia attributable to it alone form but a half per cent. of the total, and including neurotic heritage, the number reaches but one to two per cent. Its action he considers to be by general dystrophic arrest of neuronic growth, a rare event; usually by direct poisoning of

developing cortical cells. Anti-treatment has proved of no avail.

There are excellent chapters dealing with the clinical varieties of amentia, social and legal relations of the defectives, and the potentialities and methods of treatment and training. The work is well printed and illustrated by typical photographs of cases.

Legal Responsibility of the Drunkard. By H. NORMAN BARNETT, F.R.C.S. London: Baillière, Tindall & Cox. 1908.

This excellent little book, prefaced with an introduction by Sir Andrew Reed, is an effort to supply a need which Mr. Barnett considers exists in the legal and medical professions with regard to the responsibility of the chronic drunkard, and pointing out in what respects the alcoholic condition renders a person responsible, and under what conditions he is not fit to exercise the legal rights of a sane person, as well as that the drunkard should not be treated as other criminals.

An introduction is followed by ten chapters which deal with "Crime and Responsibility," "Heredity," "Legal attitude towards and Legal Penalties for Drunkenness," &c. A most important chapter follows dealing with the "Legal Capacities of these Cases," and treats of their legal responsibilities, their ability to manage their own affairs, and to be accepted as witnesses. The last chapter is upon the "Recognition of the Disease." The book shows very clearly the real nature of the disease and the problem of inebriety, with the methods demanded in dealing with it.

The introduction by Sir Andrew Reed is a well put case for the medical treatment rather than punishment of such people. It seems strange nowaday why more criminal inebriates are not dealt with by committal to a reformatory, since the cost of these cases is borne by the State and not by the local authority. Medical men know, however, the great difficulties there are in getting inebriates committed to a reformatory, at all events in the present unsatisfactory state of the law, which gives them every chance of evading committal. Had numbers of such cases been treated in the early stage of the disease they might have been reformed, and have been spared ending their days in a lunatic asylum.

A Practical Course of General Physiology. By D. NOEL PATON, M.D., and G. HERBERT CLARK, M.B. Pp. 39. Glasgow: James Maclehose & Sons. 1908.—This is a convenient syllabus for a practical class in physiology. It proceeds on the novel plan

of giving none of the deductions from the experiments described. The student is expected to fill that in for himself, and the book is interleaved for the purpose. This should help him to remember the work. One is glad to see that the medical student is not burdened with too much detail about the reactions of nerve-muscle preparations, and that adequate attention is given to the special senses. The important experiments on these are too often neglected.

Encyclopædia and Dictionary of Medicine and Surgery. Vol. VII, *Ner–phy*. Pp. xii, 579. Edinburgh: William Green & Sons. 1908.—The chief articles in this volume are on "Diseases of the nerves, the nose, eye, pancreas, peritoneum, and pharynx." Of the excellence of the articles as a whole and their general arrangement we can speak with confidence, the majority being by leading authorities in their several specialities. It is a matter for some regret, however, that these authors have not always had the opportunity of bringing their contributions up to date. For instance, for deviations of the septum without ridges we are told that the only satisfactory operation is that of Dr. Asche, of New York, no mention being made of the operation now almost universally practised—that of "submucous resection."

Guide to the Clinical Examination and Treatment of Sick Children. By JOHN THOMSON, M.D. Second edition. Pp. xxviii, 629. Edinburgh: William Green & Sons. 1908.—This book, as it now appears in a revised and enlarged form, is one of the best expositions of pædiatrics in the English language. Set descriptions of morbid anatomy are purposely left out; but the clinical aspect of disease in children is expounded in a masterly manner. Everyone interested in the disorders of childhood should read this book, not only for the sake of its intrinsic value, but also because it is an inspiring example of the fruitfulness of industry linked with freedom from prejudice. The book is well printed on rather heavy paper, and its value is greatly enhanced by the illustrations, almost all of them reproduced photographs.

Common Affections of the Liver. By W. HALE WHITE, M.D. Pp. viii, 302. London: James Nisbet & Co. Ltd. 1908.—The author apologises for the appearance of another book on the liver, but the clinical teaching contained herein is of the highest value, and is presented in an attractive form, such as will appeal to students beginning their work, rather than those who have extensive clinical knowledge. The author has little sympathy with those patients who call everything "liver." He remarks that there is no evidence that the symptoms so-called are due to liver at all. Dr. Hale White is a clinical teacher of large experience, and his views on all the commonly-accepted diseases of this organ must command universal esteem.

Essentials of Surgery. By ALWYNE T. COMPTON, F.R.C.S. Pp. viii, 428. London: Henry Kimpton. 1908.—The author has evidently expended much time and pains in the compilation of this book, which is above the average of its class in merit and arrangement, is in legible type, has numerous good illustrations, and is well indexed. There are several clerical mistakes, and the information—as with fractures of the lower end of the humerus—is not always up to date. Nevertheless, we can commend the work as a suitable one for those who wish to revive their memories before examination, and for occasional reference by those with a limited affection for more comprehensive literature.

Golden Rules of Venereal Disease. By C. F. MARSHALL, M.D., F.R.C.S. Pp. 90. Bristol: John Wright & Co. N.D.—This is one of the waistcoat-pocket size booklets of the well-known "Golden Rules" Series, and deals with syphilis, gonorrhœa, and soft chancre. The author, whose larger work on the same subject we have had occasion to praise highly in a former number of our *Journal*, here provides the reader with an excellent epitome of the leading points in the pathology, symptomatology and treatment of the diseases mentioned. Each "golden rule" emphasises some important matter which the tyro, at least, might in practice forget. We consider that the space at the writer's disposal has been very well used.

"The Ophthalmoscope." Vol. VI, No. 4. Pp. 114 London: George Pulman & Sons.—This number of the *Journal* is devoted almost entirely to articles on disease of the eye in relation to accessory sinus disease of the nose. From cover to cover the matter is full of interest, and forms a fairly complete *résumè* of present-day knowledge of these important questions. The editors are to be congratulated on their progressive foresight and literary enterprise

Hay Fever, Hay Asthma: its Causes, Diagnosis and Treatment. By WILLIAM LLOYD. Second Edition. Pp. 101. London: H. J. Glaisher. 1908.—This short work on a very prevalent disease reviews various investigations that have been made from time to time, and some of the theories that have been put forth to account for the symptoms, and details methods of treatment that have been adopted by laryngologists and physicians. The author states in his preface that he "does not delude himself with the idea that this little work will supply a 'long-felt want.' The chief reason for writing it is to record certain opinions that the author holds upon causes and effective treatment of hay fever." It is not very clear to us, on reading the work, what are the distinctive views which are the main object in producing the work, although we see that he accepts the classification which differentiates the varieties of pseudo-hay fever into

the sensori-motor and ideo-motor forms—a classification which, as far as we are aware, has only been given once before. We are glad, however, to see that he condemns in no measured terms the curious advice of "one author," that in obstinate cases the complete removal of middle and inferior turbinates is a method to be adopted. As regards the author's own series of cases, it is refreshing to find that touching with the cautery produces in so many cases the "result, cure." We only wish a little further detail were given, as temporary cures are as prolific as final failures in the hands of most practitioners. It is difficult to see in what respects this work adds to our knowledge of this affection, but that it meets a need is shown by the fact that a second edition has already been called for.

The Law in General Practice. By STANLEY B. ATKINSON, M.A., M.B., B.Sc. Pp. viii, 239. London: Henry Frowde and Hodder and Stoughton. 1908.—Mr. Atkinson is well qualified to write upon this subject, and we can thoroughly recommend his book to all medical men commencing, or not fully experienced in practice. It deals with a large number of contingencies in matters forensic, ethical and medical, and abounds with useful hints and profitable warnings. The book is easily readable, and if well digested should prove of the utmost value to the young professional man, in affording him a ready-made experience and helpful counsel in dealing with many perplexing occasions almost certain to beset his early career.

The Care and Nursing of the Insane. By PERCY J. BAILEY, M.B., C.M. Pp. 270. London: The Scientific Press.—This little book is written for candidates for the nursing certificate of the Medico-Psychological Association. It gives an outline of anatomy and physiology, it indicates some of the chief symptoms of disease, both physical and mental, and their significance in such a manner that they may be understood by the uninitiated. We think the author has succeeded in his endeavours. The book should be useful to those for whom it is designed.

Death and its Verification. By J. BRINDLEY JAMES. Pp. 56. London: Rebman Limited. 1908.—The author of this booklet is the examiner-in-chief for the Association for the Prevention of Premature Burial. He gives fourteen different tests, including the injection of fluorescin and an X-ray examination of the heart. The use of the stiletto, or still better an efficient *post-mortem* examination, must effectually prevent burial before death. The death verification bag, with its thirteen weapons, can rarely be necessary to satisfy any medical man as to the fact of death. The usual armamentarium of the doctor's pocket should suffice.

The Extra Pharmacopœia of Martindale and Westcott. Revised by W. HARRISON MARTINDALE, F.C.S., and W. WYNN WESTCOTT, M.B. Thirteenth Edition. Pp. xl, 1164. London: H. K. Lewis. 1908.—A thinner volume than the last, but containing nearly 200 pages more. This has been accomplished by the use of a different paper, and by resetting in smaller type a large amount of the matter to which reference is less frequently made. Both prescriber and dispenser must find the book to be an invaluable and reliable guide. Everything new will be found there, but the print is now so small that a magnifying glass becomes essential to the reader.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Second Series. Vol. XIII. Pp. 929. Washington: Government Printing Office. 1908.—The present volume includes 5,566 author titles, 7,678 subject-titles of separate books and pamphlets, and 40,221 titles of articles in periodicals. No praise is too high for the painstaking labour involved in the preparation of this most valuable and necessary work of reference, which is a model of completeness and accuracy. As an example of its extensive character, we may mention the subject of "Plague," to which fifty-three pages of references are given. "Pregnancy" similarly occupies more than a hundred pages.

A Practical Text-Book of Infectious Diseases. By R. W. MARSDEN, M.D. Pp. vi, 296. Manchester: University Press. 1908.—When so capable and well-known a writer as Dr. Marsden undertakes a book which is to fill a real gap in the ranks of medical literature, it would seem that all the essentials of a successful venture are found. Unfortunately the actual fruit of his labours does not quite fulfil these expectations. The book is a compromise. On the one hand, it is not a complete and exhaustive treatise, indeed, the author assures us that he did not mean it to be. Yet he has not, on the other hand, realised the alternative plan which he set before himself, for he has written a book in which it is not easy to refer quickly to any special point. We think it would be better in future editions to condense the subject-matter, and arrange it under headings so printed as to catch the eye readily. If this could be done, there is no doubt that the book would find adequate support from medical men, and probably from students also. Some illustrations would make it more interesting.

Editorial Notes.

The University of Bristol.

THE long-continued efforts of many pioneers in the movement for obtaining University honours for Bristol and the West of England have at length met with well-deserved success—the Charter of the University of Bristol is signed, sealed and delivered. It was inevitable that, in a cause which demanded a large measure of faith and tenacity in the face of years of discouragement, many of these early workers should have passed from our midst, leaving us with a sense of deep regret that they cannot share in the city's legitimate sense of triumph; but a goodly number are with us yet to aid with their matured judgment in the early growth and development of the youngest British University. The names of those who, by the offices they have worthily filled on the University College Council and staff, or in generously giving towards the necessary funds have fostered the University movement, have been the subject of previous notices in our pages. To them all honour. But we may, perhaps, offer special congratulations to the Lord Bishop of Hereford and Mr. J. W. Arrowsmith—two of those who are pioneers in the truest sense. One of the foremost educationists of his day, and endowed with quite exceptional powers of organisation in such matters, the Bishop of Hereford gave a great impetus to the University College movement in Bristol that he had largely initiated; and Mr. Arrowsmith has worked with characteristic energy and whole-hearted devotion to the cause, and has succeeded, Prometheus-like, in bringing us fire from heaven.

* * * * *

R.A.M.C.

BRISTOL medical men, as well as the citizens of this city, have reason to be proud of the success that had attended the formation of the 3rd South Midland Field Ambulance, for within a year not only was the corps up to, or rather above, its establishment, but it is the first in the United Kingdom to reach this position except one unit that had a Bearer Company to start with as a nucleus. That this has entailed a very arduous amount of work will well be understood. It involved the examination of

every recruit, the instruction of most of the recruits in the very elements of infantry drill and of first aid work, besides the more advanced training in field service work and stretcher drill. Such is the composition of a field unit, that the corps finds numerous outlets for energy, for the management and care of horses is needed as well as proficiency in driving and riding. When to all this there is added the vast correspondence, office details, preparations and working of camp and pay accounts, it will readily be understood that the duties of the commanding officer are no sinecure.

The corps has been much hampered in many ways by the absence of head-quarters of its own. For the past year or more they have been housed in the drill hall of the 4th Glo'sters, two small rooms being allotted to it for orderly room and quartermaster's store, and the use of two more on certain nights. At the present moment a large quantity of necessary stores are waiting to be sent simply because there is no room anywhere to store the big articles, such as wagons, water-cart and tents. It is satisfactory to learn that this will soon be remedied.

Last August Lt.-Col. A. W. Prichard took about 100 men to Swanage and Salisbury Plain with seven officers. This year's camp will be at Lyndhurst, and will be attended by a full strength of officers (10) and men (220); indeed it may have more than its strength in men, as under certain conditions and for certain duties the corps can recruit above its establishment. The value of camp life and discipline cannot be over-estimated, and was conspicuous by the great strides made by all who attended.

On May 23rd, Empire Sunday, a church parade was held at Redcliff with the Gloucestershire Engineers. About 250 were on parade, and looked extremely smart and soldierly in the blue walking-out dress. The band—for the corps has its own band, both brass and bugle—gives additional smartness, and is a great asset when parades take place.

The subscription list which was opened in April, under the auspices of the Bristol Medico-Chirurgical Society, to make a presentation to the corps, has been well responded to, and already amounts to £10 10s. 6d. It is hoped that further subscriptions

will soon raise the total to the required sum of £15 15s. The presentation will take the form of a Drum-Major's Staff, and arrangements are being made to formally present this mark of appreciation at a parade in June.

The officers are Lt.-Col. A. W. Prichard, V.D., in command, Major James Young, Captain B. M. H. Rogers, Lieutenants J. Smith Mather, J. A. Green, P. Moxey, C. Lavington, and Quartermaster and Hon. Lieut. H. Lambert, while M. C. Coleridge and C. Corfield are only waiting for their commissions to appear in the *Gazette*. The establishment of officers is thus complete. It may be said without fear of contradiction that the present satisfactory state of the corps is due to the regular attendance of the officers at drills, and ungrudging hard work that has been put in by one and all of them to make the men efficient in drill, first aid and transport work. Five drills a week has been the rule, so that if the men do not know their work it is their own fault, and the blame cannot be laid on the officers.

* * * * *

Electrical Methods of treatment.

THE paper by Dr. Herbert Tayler on "Electricity in General Practice" (page 145), and the further papers on "Ionisation or Cataphoresis," by Dr. H. P. Tayler and Dr. Lewis Jones (page 132), give us an opportunity of directing especial attention to a subject which has until recently been very disappointing in medical treatment, and has only persistently been carried out by a few enthusiastic specialists. Of late years the utility of the X-rays, and the more general adaptation of electrical methods to clinical work has opened up an entirely new field, and has led to developments which appear to have no limit. The subject of treatment by ionisation is obviously in its infancy, but already its field of utility is so wide that it demands the most careful attention of all who are engaged in the work of practical medicine. The papers we now publish show how wide this field already is, and will be quite a revelation to those who have as yet not studied the subject. We are indebted to Dr. Lewis Jones for the initiation of much of this

work, but his pupils are spreading and advancing the methods with great zeal and industry. We think that his presence at a recent meeting of this Society will stimulate the use of ionic medication in this district.

* * * * *

The Campaign against Tuberculosis.

THE International Congress at Washington, held last year, has given a great impetus to the work of the National Association for the Study and Prevention of Tuberculosis in the United States. A volume issued by the New York Charities' Publication Committee (1908), through the generous co-operation of the Russell Sage Foundation, gives a summary of what has been done, and appends a directory of Institutions dealing with Tuberculosis in the United States and Canada. Since the foundation of the first of these, the Adirondack Cottage Sanatorium, by Dr. Edward L. Trudeau, in 1885, the growth of the movement has been so rapid that these institutions have sprung up in all parts, so that there are now 250 special sanatoria, and new ones are announced almost daily. The promise of restoration of patients to wage-earning capacity has appealed with effective force to legislators as well as to private philanthropy. Recently the dispensary has come into prominence, but the provision for advanced and hopeless cases remains the distressing lack in our equipment, both in America and in our own country also.

The diminution in the death-rate for tuberculosis in the last two decades is well known and remarkable. Some recent evidences of this, given from statistics in Germany, have recently been published (Bandolier and Roepke, *Tuberculosis in Diagnosis and Treatment*, translated by Morland, London, 1909). In spite of this diminution, it is estimated that the number of sufferers from pulmonary tubercle in Germany is about 800,000, those capable of conveying infection about 600,000, and the number of fatal cases yearly some 80,000; hence we must, "in a chastened spirit, admit the necessity of further prophylactic and curative measures." It is again emphasised that "the whole

modern campaign against this enemy of mankind is dominated by the attempt to improve the methods of diagnosis on the one hand and to make them accessible to the practitioner on the other. It stands or falls with this improvement in diagnostic method, with the early diagnosis of tuberculosis."

The annual report of the Winsley Sanatorium for 1908 shows what is being done in this district. From this it will be seen that during the past year 215 patients were discharged, and of these

89=41.4 per cent. were considered fit to return to work ;

82=37.7 per cent. improved, and many returned to work.

This gives a total of 171 (=79.1 per cent.) who had decidedly improved under treatment, and were for the most part able to resume some wage-earning occupation. The medical officer observes that " no sanatorium has yet been able to fill its beds with early cases only, but it is hoped that each succeeding year will give an increasing proportion of early cases, as it becomes more widely realised that consumptives, if sent to a sanatorium sufficiently early, can make complete recovery, and be restored to full working capacity." In spite of the excellent work being done, it is much to be regretted that this Sanatorium is still hampered by a heavy mortgage debt. The funds are, however, ample to pay all costs, if the interest on the debt could be removed.

* * * * *

The Zoophil-Psychosis.

We learn from the *Medical Record*, March 6th, 1909, that Dr. C. L. Dana, New York, has written a very useful article on this modern malady, and he give numerous illustrative cases. This psychasthenia appears to be a rapidly-spreading disease of our modern civilisation, allied to hysteria, neurasthenia and occupation psychosis of modern life. The author pleads for sick humanity, and against the excesses in such sentiment for animals as leads to selfishness and injustice, and the development of more psychopathic states. There is growing up an enormous mass of artificially cultivated tenderness towards a suppositious suffering. There will come next tears over the suffering of a fading flower, and sorrow over

the unquenched thirst of the withering plant. Our anti-vivisection societies are furthering the development of this condition by mutual encouragement among the unstable and self-indulgent; whose psychosis becomes a source of distress to self and friends, and leads to demoralisation to the community culminating in serious social injustice.

Notes on Preparations for the Sick.

"Diamalt."—THE BRITISH DIAMALT CO.—This preparation is described as a pure and highly diastasic extract of malt. We have examined its digestive action on starch at the temperature of the body, and found it to be quite satisfactory.

[A digestive experiment was made in an incubator just below 40° C. During the night a considerable amount of starch was converted into sugar.—O.C.M.D.]

"Glidine."—MENLEY AND JAMES LTD.—Under the above name a food preparation has been placed on the market, and the proprietors claim that it is a purely vegetable protein food, prepared wholly from wheat. It is also stated to contain lecithin, and to be practically free from carbohydrates. So many foods are described as free from carbohydrates that it was deemed desirable to make a fairly complete analysis. A microscopic examination revealed a vegetable structure, but starch grains were almost entirely absent. We have never examined such a preparation containing less. No sugar could be detected. An attempt was made to extract lecithin, but it was not found possible to obtain a sufficient quantity for identification. As an unsweetened food, rich in proteids and exceptionally free from carbohydrates, we can strongly commend "Glidine," especially if prepared with milk, so that additional fat may be introduced.

ANALYSIS OF "GLIDINE" (by O.C.M.D.).

Moisture	9.20 %	(9.20)
Fat	0.42 %	(0.42)
Ash	0.44 %	(0.44)
Proteids	89.50 %	(89.50)
Cellulose, etc.	0.44 %	(0.44)
	100.00	(100.00)

Iodoglidine.—MENLEY AND JAMES LTD.—An organic compound of iodine with protein. The separation of the iodine from

the albumin takes place almost wholly in the intestine, only traces of iodine being liberated in the stomach. The iodine is gradually and slowly liberated and slowly absorbed. It therefore gives the fullest benefit, and toxic symptoms are not likely to arise.

The Library of the Bristol Medico-Chirurgical Society.

The following donations have been received since the publication of the List in March:

May 31st, 1909.

The Editor of *Albany Medical Annals* (1) .. .. 1 volume.
A. L. Flemming (2) .. .. 12 volumes.
R. G. Poole Lansdown, M.D. (3) .. .. .. 1 volume.
A. Shingleton Smith, M.D. (4) .. .. .. 1 volume.

Pamphlets have been presented by the Smithsonian Institution, the Director of the Public Health and Marine-Hospital Service of the United States, Mr. Paul Bush and Mr. L. M. Griffiths.

SEVENTY-SECOND LIST OF BOOKS.

The titles of books mentioned in previous lists are not repeated.

The figures in brackets refer to the figures after the names of the donors, and show by whom the volumes are presented. The books to which no such figures are attached have either been bought from the Library Fund, or received through the *Journal*.

	Atlas of Clinical Medicine, Surgery and Pathology (Edited by J. Hutchison) 2 vols.			1901-07
Bateson, W. ..	*Genetics*		(2)	1908
Bennett, Sir W. H.	*Massage in Recent Fractures*	4th Ed.		1909
Bramwell, B.	*Clinical Studies.* Vol. VI		(4)	1908
Browne, J. ..	[*Myographia nova*] (plates only)		(3)	1684
Childe, C. P. ..	*Operative Nursing and Technique*			1909
Clayton, E. C.	*A Compendium of Food Microscopy*			1909
Crichton-Browne, Sir J.	*Parcimony in Nutrition*			1909
	Encyclopedia and Dictionary of Medicine and Surgery, Green's Vol. X			1909
Fowler, J. S. ..	*Infant Feeding*			1909
Glassington, C. W.	*Golden Rules of Dental Surgery*	3rd Ed.		[N.D.]
Gresswell, G. & A.	*Health, Morals and Longevity*			1909
Hay, J. ..	*Graphic Methods in Heart Disease*			1909
	Heredity and Disease, Discussion on			1909
Hogarth, A. H.	*Medical Inspection of Schools*			1909
Hopf, L. ..	*The Human Species*			1909
Hort, E. C. ..	*Rational Immunisation in Pulmonary Tuberculosis*			1909
Hunter, W. ..	*Severest Anæmias.* Vol. I			1909
Husband, H. A.	*The Students' Pocket Prescriber* ..	New Ed.		1909

Hutchinson, Sir F. Treves and J. *A Manual of Operative Surgery.* Vol. I .. .. 3rd Ed. 1909
Lane, W. A. .. *The Operative Treatment of Chronic Constipation* .. 1909
Lithgow, R. A. D. *Heredity* .. .. (2) 1889
Lock, R. H. .. *Variation, Heredity and Evolution* .. .. .. (2) 1907
Macdonald, Isabel *Home Nursing* 1909
Minett, E. P. .. *Differential Diagnosis of Bacteria* 1909
Muir, R. .. *Studies on Immunity* 1909
New and Non-official Remedies 1909
Parkes, L. C. .. *House Drainage in Relation to Health* 1909
Patten, S. N. .. *Heredity and Social Progress* .. .. (2) 1903
Peake, G. A. .. *Notes on Dental Anatomy* 1908
Probyn-Williams, R. J. *Golden Rules of Anæsthesia* .. 3rd Ed. [1908]
Reid, G. A. .. *The Principles of Heredity* .. 2nd Ed. (2) 1906
„ .. *The Present Evolution of Man* .. .. .. (2) 1896
Rentoul, R. R. *Proposed Sterilization of Degenerates* .. .. (2) 1903
Research Defence Society, Publications of the 1909
Ribot, T. .. *Heredity* .. .. 3rd Ed. (2) 1875
Saleeby, C. W. *Psychology* .. .. (2) [N.D.]
„ *Heredity* .. .. (2) [N.D.]
Smith, E. A. .. *Suture of Arteries* 1909
Still, G. F. .. *Common Disorders and Diseases of Childhood* 1909
Thomson, J. A. *Heredity.* .. .. (2) 1908
Treves and J. Hutchinson, Sir F. *A Manual of Operative Surgery.* Vol. I .. .. 3rd Ed. 1909
Weismann, A. *The Germ-Plasm.* (Tr. by W. N. Parker and H. Rönnfeldt) .. .. (2) 1893
Whitelocke, R. H. A. *Sprains and allied Injuries of Joints* 1909
Wright, Sir A. E. *Studies on Immunisation* 1909

TRANSACTIONS, REPORTS, JOURNALS, etc.

Albany Medical Annals .. ..(1) Vol. XXIX 1908
American Journal of Ophthalmology, The .. .. .. Vol. XXV 1908
Archives of Pediatrics .. .. Vol. XXV 1908
Bookseller, The 1908
Boston Medical and Surgical Journal, The .. .. Vol. CLIX 1908
Bristol Medico-Chirurgical Journal, The .. .. Vol. XXVI 1908
British Journal of Children's Diseases, The .. .. .. Vol. V. 1908
British Journal of Dermatology, The .. .. Vol. XX 1908
British Journal of Tuberculosis, The .. .. Vol. II 1908
Bulletin de l'Académie de Médecine .. .. Tom. LVII, LVIII 1907
Clinical Journal, The .. .. Vol. XXXII 1908
College of Physicians of Philadelphia, Transactions of the Vol. XXX 1908
Écho médical du Nord, L' 1908
Gazette de Gynécologie .. .. Tom. XXII, XXIII 1907–08
Gazette des Hôpitaux 1908
Glasgow Medical Journal, The .. .. Vol. LXX 1908
Hospital and Charities, Burdett's 1909

Hospitals—Medical Reports of the Central London Throat and Ear Hospital	Vol. I	1908
Saint Bartholomew's Hospital Reports	Vol. XLIV	1909
Indian Medical Gazette, The	Vol. XLIII	1908
Johns Hopkins Hospital Bulletin, The	Vol. XIX	1908
Journal of Experimental Medicine, The	Vol. X	1908
Journal of Medical Research, The	Vol. XIX	1908
Journal of Mental Science, The	Vol. LIV.	1908
Journal of Nervous and Mental Disease, The	Vol. XXXV	1908
Journal of Obstetrics and Gynæcology of the British Empire	Vol. XIV	1908
Journal of Tropical Medicine, The	Vol. XI.	1908
Journal of the Royal Sanitary Institute	Vol. XXIX	1909
Library Association Record, The	Vol. X	1908
Library, The	N.S., Vol. IX	1908
Medical Annual, The		1909
Medical Press and Circular, The	[Vols. CXXXVI, CXXXVII]	1908
Medico-Chirurgical Society of Edinburgh, The Transactions of the	Vol. XXVII	1908
Medico-Chirurgical Transactions	Vol. XC	1907
New York Obstetrical Society, Transactions of the		1908
Nord médical, Le	Tom. XIV	1908
Ophthalmological Society, Transactions of the	Vol. XXVIII	1908
Revue de Thérapeutique		1908
Revue générale d'Ophtalmologie	Tom. XXVII	1908
St. Petersburger medicinische Wochenschrift		1908
Smithsonian Report for 1907		1908
Studies from the Department of Pathology of the College of Physicians and Surgeons, Columbia University	Vol. XI	1906–08
Surgery, Gynecology and Obstetrics	Vol. VII	1908
West London Medical Journal	Vol. XIII	1908
Wiener klinische Wochenschrift		1908
Year-Book of Scientific and Learned Societies		1908
Zeitschrift für Urologie	Bd. II.	1908
Zentralblatt für Chirurgie		1908
Zentralblatt für Gynäkologie		1908
Zentralblatt für innere Medicin		1908

MEETINGS OF SOCIETIES.

Bristol Medico-Chirurgical Society.

March 10th, 1909.

Dr. J. MICHELL CLARKE, President, in the Chair.

LT.-COL. A. W. PRICHARD, V.D., made a statement regarding the 3rd South Midland Field Ambulance (R.A.M.C., T.F.). This new unit, which had been authorised by the War Office

about twelve months previously, had been raised in Bristol, and had recruited so successfully that the establishment was now complete as regards both officers and rank and file. A suggestion was made that the medical profession of the city should combine to make some presentation to the newly-raised medical corps as a mark of appreciation of its successful establishment. Resolution: "That the details of the suggestion be left in the hands of a sub-committee consisting of Dr. S. Smith, Mr. Cross and the Secretary, who shall collect subscriptions for the purpose indicated."

Dr. H. P. HAWKINS, of London, gave an address on the **Natural History of Ulcerative Colitis and its bearing on treatment.** After dealing with the pedigree of the disease, which can be traced back for nearly 300 years as epidemic dysentery or "bloody flux," Dr. Hawkins dealt with the gradual decline of the disease in epidemic form in England until the sporadic cases ceased to attract much attention, until they eventually reappeared under the new name of "Ulcerative Colitis." The various forms of the disease were described: (*a*) the acute continuous disease; (*b*) the chronic disease, continuous and intermittent; (*c*) dysenteric diarrhœa; (*d*) the acute and the chronic disease; (*e*) the hemorrhagic disease (lower segment type). The variations did not necessarily betoken separate forms of disease. From a consideration of the bacteriological and clinical evidence, there were grounds for thinking that our long-continued cases may be related to the short fatal cases, both perhaps owing their origin to one of the organisms of the dysenteric group (Flexner and Shiga). The chronic British disease may be a secondary non-specific ulceration, in which case the prospect of a generally applicable specific treatment becomes remote; though the proved value of serum treatment in tropical bacillary dysentery made one hope that the British disease was the very type which should yield to serum or vaccine treatment. Treatment with Shiga-Flexner serum and with coli vaccine had not yielded very marked success. Shiga's calomel treatment had appeared the best line to adopt; right-sided colostomy with irrigation of the large bowel was, in his opinion, likely to prove the most life-saving proceeding in the long run. It affords complete rest to the colon, as well as efficient irrigation. A discussion followed, in which Dr. Shingleton Smith, Dr. Walker Hall, Mr. Hey Groves, Dr. Symes, Dr. Every-Clayton, Mr. Stack, Dr. Cary Coombs, Mr. Bush, Mr. Lace and the President took part.

April, 14th, 1909.

Dr. J. MICHELL CLARKE, President, in the Chair.

Mr. MUNRO SMITH read a paper on **Rupture of the Plantaris Tendon.** Case 1: A man of sixty, when out shooting, felt a

sudden pain in his calf, as though struck with a stone or stick. He hobbled home with difficulty. When seen by the speaker there was no external sign of injury visible, but there was a tender spot on the inner side of the leg half-way down. He was told to rest the limb. Two or three days later there was some œdema over the front of the tibia. He went to business, and would not have any fixed apparatus applied, and disability continued. Later he went to a bone-setter, and a heavy plaster case was applied and worn for fourteen days. The man walked with a limp for six months. Case 2 was that of an athletic man who, when on the point of diving from a diving board, felt that something had struck him on the calf. He looked round to see what it was. On leaving the bath the man found that he was lame. When seen by the speaker seven weeks later, he also had a tender place half-way down the calf, and œdema of the front of the leg. The literature on the subject was very scanty, and the cases mentioned were the only ones the speaker had seen.—Dr. JAMES SWAIN related his personal experiences of a similar accident, which occurred when he was playing tennis. The sudden pain was like that of a whip stroke. He reached home with difficulty. He had strapping applied from the ankle to the knee, and this gave great relief immediately. No pain was felt after three or four days, and at the end of a week he thought all was well, and had the strapping removed. Then pain returned, and the strapping had to be re-applied. He was well in three weeks. The best treatment was, he believed, to strap the limb and allow movement, not to rest the limb in splints.—Dr. A. R. SHORT mentioned a case where symptoms very similar to those mentioned above had been due to thrombosis in a vein of the leg.

Dr. CECIL WILLIAMS showed a case of **Joint Swellings associated with enlargement of lymphatic glands,** and with the development of pes cavus. The patient was a boy who had been admitted to hospital for pain and swelling in the knees. At first there were no glandular swellings, but these developed later. Shortly before the glandular affection there was an elevation of temperature and sponginess of the gums, but these troubles had been transient. Lastly pes cavus on the left side became noticeable. The speaker thought the case was one of Still's disease. In skiagrams the knee-joints appeared normal. There was no reason to think the boy had had either gonorrhœa or syphilis, and Calmette's reaction was not obtainable.—Dr. EDGEWORTH remarked that the case was rather puzzling in that pes cavus had been acquired with extensor plantar reflex. What had this condition to do with the knee trouble? The general view was that pes cavus of this type was due to some pyramidal-tract affection together with myotatic irritability. Possibly both the knee and foot condition was due to some nerve lesion, but the tenderness of the knee was against that view.—THE PRESIDENT remarked that trophic joint

troubles sometimes were of a sub-acute character, and in one case he had seen the joint, which was tender and painful, looked as though pus would have to be evacuated, though it contained sterile fluid.

Dr. RENDLE SHORT gave a demonstration of some **Parasites of Tropical Diseases.**

Dr. ALEXANDER read a paper on **Cretinism and the Puerperium: a Sequel to Thyroid Treatment.** (Reported in full, *vide* p. 128).

Dr. WATSON WILLIAMS read a note on **Two Radical Mastoid Operations** with features of interest, and on some **Points in the Technique of the Radical Operation** for chronic otitis media purulenta. A case was shown proving how good the hearing power might be after the operation, for the patient could hear a loud whisper at a distance of seven feet. The speaker had used the periosteum of the mastoid to line the bony cavity which was made. He thought it was a good thing in some cases to leave the mucous membrane intact, especially near the foramen ovale. In other sinuses good results followed when mucous membrane was left intact.

May 12th, 1909.

Dr. J. MICHELL CLARKE, President, in the Chair.

The meeting was devoted to a discussion on **Treatment by Ionisation or Cataphoresis.** (*Vide* p. 132.)

J. LACY FIRTH.
J. A. NIXON, *Hon. Sec.*

Local Medical Notes.

University College, Bristol.—FACULTY OF MEDICINE:—

EXAMINATION SUCCESSES.

F.R.C.S.ENG.—*Primary Examination:* A. J. M. Wright, M.R.C.S.Eng.

M.B., B.S.LOND.—*Final Examination:* E. R. Holborow. *Honours:* C. A. Joll, B.Sc., M.R.C.S., L.R.C.P., L.D.S. (*distinguished in Medicine, Pathology, Forensic Medicine and Hygiene, Surgery*), *University Medal.* Preliminary Science Examination—

Experimental Physics: G. M. Campbell. *Inorganic Chemistry:* Alice H. Christie, B. N. Walmsley. *Organic Chemistry:* F. W. T. Clemens.

CONJOINT BOARD.—*Chemistry:* A. G. Morris. *Biology:* C. L. Emmerson, G. F. Fawn, J. W. Gilbert, R. B. Johnson, C. J. D. May. *Anatomy and Physiology:* A. G. T. Fisher. *Medicine:* J. F. H. Morgan, S. H. Kingston, H. H. S. Templeton, C. A. Joll,* F. C. Nicholls.* *Midwifery:* R. C. Clarke, A. J. Wigmore, H. R. B. Hull, C. A. Joll.* *Surgery:* C. A. Joll,* T. B. Dixon.*

M.R.C.S., L.R.C.P.—P. C. Field, H. C. Waldo.

L.D.S., R.C.S.ENG.—*Mechanical Dentistry:* J. D. Melhuish, A. H. S. Palmer, S. Saxton, R. A. Slade, B. W. Tyson. *Dental Metallurgy:* C. V. Osborne, A. H. S. Palmer, S. Saxton, R. A. Slade, B. W. Tyson. *Final Examination: Part I*—F. J. Hayman; *Part II*—R. J. Burton.*

APPOINTMENTS.

Fells, Arthur, M.B., C.M.Edin.—Clinical Assistant at Bristol Eye Hospital.

Goulden, Charles, F.R.C.S.Eng.—Ophthalmic Surgeon, Oldham Infirmary.

Rossiter, Harold T., M.R.C.S., L.R.C.P.Lond.—House Physician to Addenbrooke's Hospital, Cambridge.

Rutherford, James M., M.B., C.M.Edin.—Senior Resident Physician to Brislington House, Bristol.

Smith, L. Shingleton, M.B., B.C.Cantab.—Medical Officer to the Workhouse of the Brecknock Union.

Squire, E. W., M.B., B.S.Lond.—House Surgeon to the *Dreadnought* Hospital.

Fortescue-Brickdale, J. M., M.A., M.D.Oxon.—Lecturer in Pharmacology in the University of Oxford.

Cross, F. Richardson, F.R.C.S.—Bradshaw Lecturer to the Royal College of Surgeons for 1909.

Bazalgette, S., M.R.C.S., L.R.C.P.Lond.—First Assistant Medical Officer at the Fishponds Asylum.

Phillips, John R. P., M.R.C.S., L.R.C.P.Lond.—Junior Medical Officer at the Fishponds Asylum.

Jones, J. Ellington, M.R.C.S., L.R.C.P.—Honorary Skiagraphist to Bristol Orthopædic Hospital.

* Qualified.

BRISTOL.

The Royal Hospital for Sick Children and Women, Bristol.—The annual meeting of the subscribers of this Institution was held on March 29th, under the presidency of the Lord Mayor. The medical report stated that during 1908 the in-patients numbered 818 (751 children and 67 women), compared with 784 (727 children and 57 women) in 1907. 3,610 children and 1,541 women were treated in the out-patient department, as against 3,276 children and 1,456 women in the previous year. The financial statement was satisfactory, and showed that as a result of a special appeal for increased subscriptions, £5,386 had been raised. The committee has consequently been able to discharge the adverse balance of £3,998 remaining at the close of 1908, and also defray the cost and equipment of the cottage required for the accommodation of special scarlet fever cases, and the sum of £639 has been carried forward as a small nucleus of a fund for new buildings for the out-patient department.

Bristol Eye Dispensary.—The ninety-seventh annual meeting of the supporters of this Institution was held on April 6th. The report stated that the number of patients attending in 1908 had been 2,408, an increase of 53 over the preceding year. The total receipts were £207, and the total expenditure was £217. An increase in the number of regular subscribers was asked for. The examination of school children has meant an appreciable increase in the number of refraction cases, and there was a general feeling at the meeting that the education authorities should not allow this work to fall upon a charitable institution. In the evening the Dispensary Staff exhibited a number of interesting cases to medical men who were invited. There was a good muster, and this was felt to be a successful innovation.

Fishponds Asylum.—During 1908 the admissions numbered 247 (103 men and 144 women). The percentage of recoveries on the admissions were 42.42, and compared favourably with previous years; 84 patients were discharged as recovered. Deaths numbered 140 (74 males and 66 females), being 15.09 on the average of resident patients. Of 123 *post-mortems* death was due to natural causes. The highest number of patients resident at one time was 915.

Hospital Sunday Fund at Bristol.—Up to April 2nd the collections in aid of the Lord Mayor of Bristol's Hospital Sunday Fund were £1,853. Last year £1,859 was received, and as there are still some collections co come in, it is evident that the total of that year will be exceeded.

University of Bristol.—This title is now not a thing of the future, but an actual fact, as was announced on May 18th, when the Bill passed the Privy Council. The news was received in

Bristol with the ringing of church bells, and numerous flags were displayed to celebrate the event.

At a recent meeting of the Bristol City Council it was decided, with little opposition, to support the University by a rate of 1d. in the £, which will mean an addition of £7,000 per annum to the income of the University. The late Sir Frederick Wills left £5,000 towards the scheme.

It has been decided to form an Association of Alumni of the University, following the lead of the Universities of Liverpool and Toronto, where great advantages to the University have followed the formation of such associations.

Steps are being taken for the formation of a unit of the Officers' Training Corps amongst the staff and students of the University. The matter has been hanging fire, but now that a charter has been obtained things may soon take a definite shape, particularly as the Council are interesting themselves in the matter.

The Bristol Hairdressers' Association has made a grant of £20 for a research into the nature and means of prevention of sycosis barbæ. This, it is suggested, constitutes an example to other industries of the help they may expect from the University as a centre of scientific investigations.

CARDIFF.

Cardiff Medical School.—Although it is not at present possible to take the complete medical curriculum at the Cardiff College, the number of students from the medical school who have already become qualified is 123. A great stimulus to the establishment of a Faculty of Medicine will no doubt be given by the recently issued report to the Treasury of the Committee appointed to inquire into certain matters connected with the University of Wales and the Welsh University Colleges. Sir Donald MacAlister, President of the General Medical Council, who was a member of the Committee, has appended a note to the report which has special reference to the Cardiff Medical School. He points out that the large international shipping trade of Cardiff makes it a natural centre for the study of tropical diseases, and he suggests that if a special school were organised in connection with a completed medical department of the Cardiff College, students and practitioners from other parts of the country would be attracted to it. He also expresses the opinion that Cardiff possesses all the requisites for a complete school of medicine, though he is careful to say that new buildings are an essential requisite, an assertion which no one will controvert.